

# modern PHOTOGRAPH

FEB. 1951 PRICE 35 CENTS

**DYE TRANSFER:**  
*the last word*



Tana Hoban on children

Where was the photographer?

Beginners' mistakes



# What makes salon quality ?

That's a tough question. Seems that everybody has his own idea of just what salon quality is. But if it calls for a paper that can translate the subtle nuances of tone and gradation—give you print performance far beyond expectations—then that paper is Cykora.

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EDWARD WESTON

by Brett Weston

## Q. What story lies behind this picture?

**A.** A story of a great new stride in photography. This unretouched photograph was reproduced directly from Mr. Brett Weston's original  $3\frac{1}{4} \times 4\frac{1}{4}$  print made with Polaroid Type 41 black and white film. Taken indoors with naturally diffused light. Exposure: 2 seconds at shutter setting #7.



Brett Weston

Photographers everywhere are finding in the Polaroid picture-in-a-minute camera a powerful new medium for artistic expression.

In brilliance of highlights and depth of shadows, the new black and white film gives results that challenge comparison with expert darkroom production. Polaroid's new Type 41 film represents other important advances. Contrast can be controlled simply by changing the development time in the camera. Prints are completely dry the instant they come from the camera, ready immediately to frame or mount.

Polaroid picture-in-a-minute photography now has all the features of ordinary photography plus the reward of seeing your

pictures as you take them. Here is photography as it *should* be . . . free from the technical barriers between you and the picture you are creating. Like a painter or a sculptor, you *see* what you are creating *as you create it* . . . produce *better* pictures by seeing how to *take* better pictures.

Whether you are an amateur or a professional . . . beginner or salon exhibitor, visit your dealer and arrange to try this new kind of photography free, at our risk, in your own home or studio.

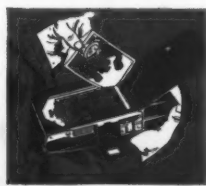
For new free booklet, "Thirty-eight ways to make the most of 60 second photography," write Polaroid Corporation, Dept. MP-2, Cambridge, Massachusetts.

Polaroid ® by Polaroid Corporation

## POLAROID *Land* CAMERA



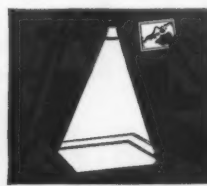
**SNAP IT!** A single setting adjusts both lens and shutter speed. Simply focus, aim, snap! It's easier than most cameras. Then pull a paper tab and . . .



**SEE IT!** Sixty seconds later lift out your beautiful black-and-white print ( $3\frac{1}{4} \times 4\frac{1}{4}$ ). No tanks. No liquids. Film and camera do it all.



**ENJOY IT!** There's no thrill like seeing your pictures *on the spot* at the very moment they mean the most, while everyone is there to share the fun.



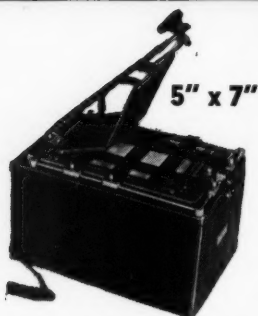
**ENLARGE IT!** Copy negatives for darkroom use are available for only 15¢ through your camera store. From these you can make your enlargements.



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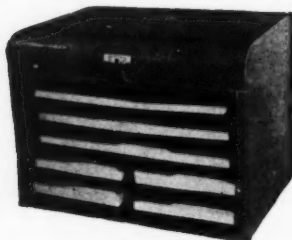
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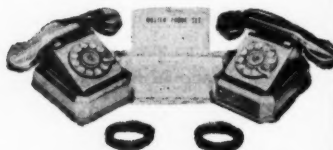


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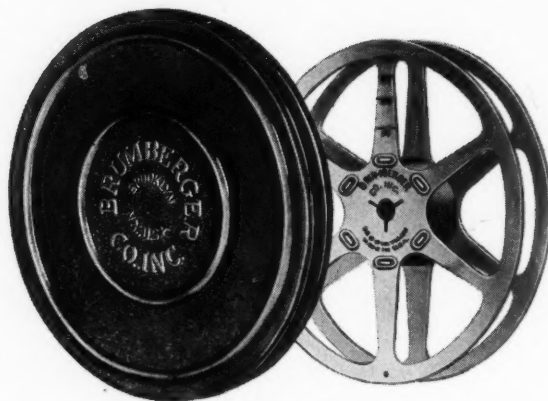


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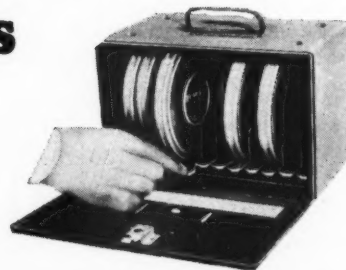
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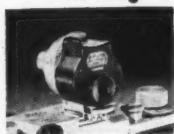
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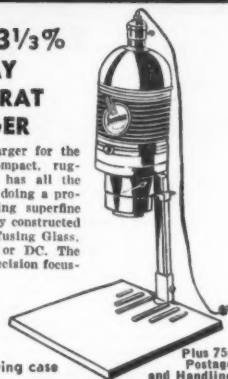


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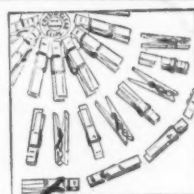
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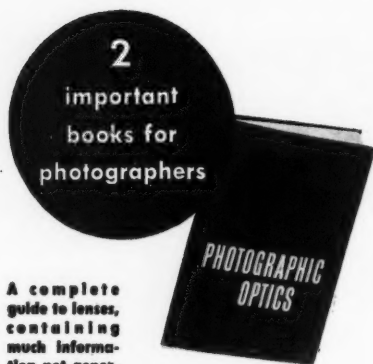
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A complete guide to lenses, containing much information not generally known.

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By Allen R. Greenleaf

Here is the information you need in order to be sure you have the best possible lens for your particular purposes. The first complete explanation, in practical, understandable terms, of ALL lenses, this book tells, for instance, why certain old lenses are better than some new ones; which lenses give maximum resolving power; the exact meaning of lens classifications; the particular problems of fast lenses, wide-angle lenses, etc.

It explains clearly the optical principles of lenses; their aberrations, and the methods of construction, merits and deficiencies of all lenses made today. Much of this information has never before been available in the practical terms needed by photographers.

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By John Alton, A.S.C.

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FEBRUARY 1951

VOL. 15, NO. 2

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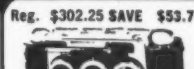
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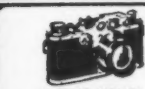


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# COFFEE BREAK with the editors

## G. B. S. . . .

George Bernard Shaw—self-recognized genius, playwright, drama and music critic, friend to Ellen Terry, novelist, philosopher, vegetarian, Socialist—and amateur photographer—is dead. The acidulous tongue which spoke in favor of prizefighters and non-violence was once raised in defense of photographing the nude.

Shaw—the scourge of prudery—was angered when a number of photographers were carried off to the pokey for taking nude photographs in the early 1900's. He was further annoyed by the fact that the timid models (as many today) averted their faces. So, he hid himself to a photographer friend's studio—had the photographs taken *au naturel*, and full face. He then awaited the constabulary, who never arrived.

Shaw was not at all genius-like among the hypo bottles. His results were often fuzzy, blurred, out of focus. But he tried—and was childishly enthusiastic about the medium.

And it may be of some comfort to know that G. B. S. felt even as you and I. "A photographer," he said, "is like the codfish who lays a million eggs to hatch but one."

## AND JOHN S. ROWAN . . .

News of the death of John S. Rowan, Hon. FPSA, reached our offices on December 5th. Those who knew the publisher of *The Camera Magazine*, either personally or by his work, realize that photography has lost more than a publisher of photographic books and magazines. It has lost a friend and a champion.

## SPOTS BEFORE YOUR EYES? . . .

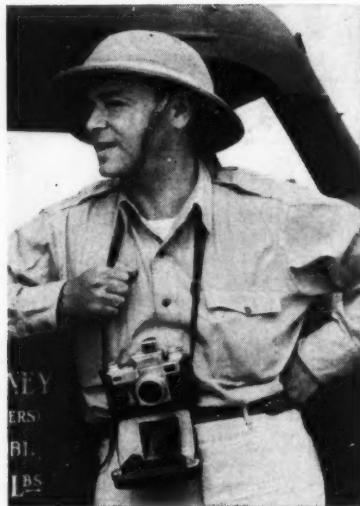
If there is anything that worries the life out of a photographer in the darkroom, it's that stuff floating around in the atmosphere that inevitably settles on a negative just when we're putting it in the enlarger—dust! Ward Pease in "After the Bath is Over" (page 66) doesn't tell you how to rid the air of dust completely, but he does tell you how to get rid of the resulting print spots.

## ELISOFON OBJECTS . . .

When Eliot Elisofon was in Africa in 1947, he took more than one roll of photographs. Take one photographer, a few cameras, and lots of film, mix well with four or five months of Africa, and you can bet the results will be more pictures than you can shake a developing tank at.

We asked Mr. Elisofon for technical data on his photographs appearing in "The Nile" on page 74. He declared that he had shot so many photographs that it was an impossibility to remem-

ber the shutter and lens settings for each one. He added that he was of the opinion that many photographers who do come up with such data for every picture invent it. He said he would tell us what cameras he used but no more. He wouldn't make up any data.



Elisofon and Contax in Africa.

We agree that keeping technical data presents an elephant-size headache (African elephant, of course), but we will continue to present as much technical information as we can get. We'll just hope that more photographers keep data books.

## TWO FIRSTS . . .

We point with pride (to coin a well-worn phrase) to a few famous firsts in this issue. On page 52 begins the first article ever printed in a popular photographic magazine giving the up-to-date story of the revised dye transfer process for making color prints. Color printing, compared to black and white, is still a pretty gangly adolescent, but he's growing rapidly and we're going to keep right up with him. As for black and white printing, next month comes another important definitive darkroom article, on Varigam enlarging paper.

Just to show we're not kidding when we say you can get darned good results with the dye transfer process, we've included a dye transfer print on page 53, made by Eastman from a transparency taken by Gjon Mili, the famous strobe photographer. This is the first photograph ever sold by Mr. Mili to a photographic magazine.

## ONE EQUALS THREE . . .

When we asked Joseph V. Mascelli to write "Formula for Filming" for us, he readily complied. A few weeks later we received his manuscript which we

originally planned to run as one article. It was so pregnant with information that we split it into three articles by the process of literary fission (glue pot, typewriter and scissors). This month we run the second installment, which like the first is jammed full of ideas and suggestions. Next month, Mr. Mascelli ends his series with a discussion of tripods and panning, two words that have had many a movie photographer mumbling in his beer.

## A ROSE BY ANY OTHER . . .

What's in a name? Plenty. Just spell one wrong, and see how many people will notice it. Anyhow, in this month's story on Thomas Eakins, the great American painter who also was a great pioneer photographer, we note his friendship with another early photographer, Eadweard Muybridge. Why such an odd spelling of his first name? It's explained in the story (page 46).

Speaking of names, we mentioned in "It's Different Now" (December 1950 issue), the famous Civil War photographer, Mathew Brady. Nope, not *Matthew*, but *Mathew* Brady. He always wrote his name M. B. Brady, but Mathew B. Brady appears on his tombstone. Maybe the stonemason couldn't spell very well. We don't know—any more than we know what the middle initial "B" stood for.

## STAHL IS STOPPED . . .

Bill Stahl, whose photographic story "Hurry Up—And Wait" appears on page 40 of this issue, is typical of the go-gettun type of news photographer. He knows his camera and what it will do. He knows how to develop and print.



Al Capp and "Wolf Girl," by Stahl.

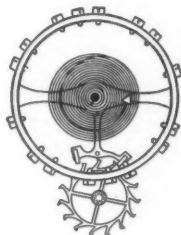
But when it comes to explanations he is sometimes at a loss for words. In the course of doing the story, we asked him what film developer he uses for all his news shots. "Just a minute," he replied. "I'll call my office and find out."

(Continued on page 12)

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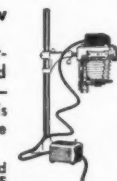
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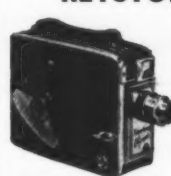
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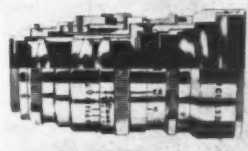
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# COFFEE BREAK with the editors

(Continued from page 8)

## REFORMED PAINTER . . .

Tana Hoban, the different child photographer, tells you how and why



Tana Hoban and client at work.

she takes her marvelous photographs on page 34. When she was growing up (not so many years ago), she wanted to be a painter. Her best friend had her eyes set on photography. Fate played her usual paradoxical role. Miss Hoban is obviously a photographer; and her friend, Miriam Troop, is now a painter.

Miss Hoban is married to Edward Gallo, who is also a photographer. They live in Philadelphia and have one child. But Miss Hoban never uses her daughter as a model. She hasn't told us, but we guess she's probably learned so much about children from having one of her own.

## EVEN THE BEST . . .

While visiting a famous professional photographer who specializes in nudes and fashion work, we discussed Charles Phelps Cushing's article, "Beginners' Mistakes," page 44. We got around to the problem of removing filters from the camera after using them, when the photographer wheeled around and raced out of the room. Soon he was back with a 2 1/4 x 2 1/4 Rolleiflex

Ektachrome transparency of a small girl at the beach.

"Like it?" he asked.

"Nice shot," we answered, "but why does it have that yellow cast? Looks like you forgot to take off your K-2 filter before loading with color film." The professional didn't say a word. We changed the topic from "Beginners' Mistakes" to the weather.

## RED FACES DEPT. . . .

While working with Jules Alexander on "How The Cover Was Made" (see page 57), we noticed dozens of prints of actress Jean Pugsley around the studio. Jean's the girl Alexander had photographed in "How Seven Leading Photographers Choose Their Models" (May, 1950 issue). We commented that he must have meant what he said about her being his favorite. Jules blushed just a little. "Well," he said, "Jean is my wife."

Then we blushed—just a little.

## COMPLETED CIRCLE . . .

They say that recorded history began when an unshaven Cro-Magnon man put a few marks on the walls of a cave in France many thousands of years ago. And that this act was the real germ of writing, art—and, of course, photography.

We have been reading recently that caves are coming back into fashion. (Man out in Colorado is renting them to fearful city dwellers at a tidy annual sum.) But we didn't know about caves-and-photography till the other day.

A notice arrived announcing the "4th International Salon of Speleological Photographic Art"—closing date for entries April 15, 1951. Meritorious pictures to be hung in Smithsonian Institution, Washington, D.C., during November. For further information, write to The National Speleological Society, 1770 Columbia Road, N.W., Washington 9, D.C.

We hastened to consult the big, beige book full of words in the library and discovered that speleology is "the scientific study of caves."

Personally, we wouldn't have known it from a hole in the wall.

## IN NEXT MONTH'S ISSUE:

**Varigam**—How good is this enlarging paper made by DuPont? A professional printer who uses it every day in his work gives a definitive opinion for you and shows you how to use Varigam.

**Ralph Crane**—Magnificent color photographer, imaginative black and white specialist, exhibits some of his best work. You'll be told how, where and why he took it.

**Self Timers**—You'll be surprised at the variety of the work turned out by amateurs and professionals using self timers. The Photo Data section lists those available.



# clearance sale!

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Timer, Hanksraft Electric 60 sec.	\$ 6.95	\$ 4.95
Timer, 60 Minute	4.95	2.95
Timer, Mark Electric 60 sec.	11.95	6.95
Filter Paper 10" Pkg.	1.00	.79
EZ View 35mm Film	.25	3/25¢
Congress Film Clips	.23	6/1.00
Film Hangers 3 1/4 x 4 1/4 Kaye	.95	.49
Print Frames, Wood 4x5	1.25	.69
5x7	1.95	.98
8x10	3.95	1.98
Strip Meters	4.95	1.98
Albert Film Chests	5.95	1.95
Pelouze Scales	8.50	4.29
Plano Safelites	1.95	.79
Kodak Miniature Paper Boards	7.00	4.50
Easel 11x14 Viceroy	14.00	8.95
Easel 11x14 Aray	14.95	7.95
Print Roller 8" Albert	1.65	.89
Apron Lab 36x43 Plastic	2.95	1.29
Enlarger Cover 27x35	2.95	1.29
Sponge	.30	2/29¢
Tilt Tops Aluminum	1.95	.98
Spotlight, Queenie 500 W less lamp	24.95	9.95
Brifelite Sunspot	15.00	4.95
Tripod, Quickset Senior	42.00	26.25
Tripod, Quickset Hi-Boy	49.95	31.15
Pan Head, Royal	11.50	5.45
Tripod, Albert President with Pan	29.50	18.85
Hydro Agitators, B-W	1.50	.89

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35mm Bulk Film Loader, Morton	9.95	3.95
Mercury Thermometer—Lab Type	4.50	1.49
Testrite Thermometer	1.25	.59
35mm Strip Printing Set	1.50	.49
Graduates Enamel 16 oz.	1.25	.59
Retouching Kits, Trojan	12.95	1.49
Panchoversal Kits	10.00	1.95
Sampler Oil Color Kit	1.50	.98
4" Oil Color Tubes	1.00	.49
Lantern Slide Binders Kodak	.35	.15
Graduate Enamel 1 quart	1.65	.89
Faultless Funnel Sets	1.39	.49
Flo-Kleen Water Filter Kits	2.95	.59
Printer, Beacon 5x7	15.00	7.95
Printer, Viceroy 4x5	14.75	7.95
Reel Chest 16mm Dabrite	4.95	2.98
300' 8mm Reel or Can, each	.59	.39
400' 16mm Reel or Can, each	.59	.39
Reel Chest Book Type 8mm	3.95	.79
Editor 16mm Famous Brand	29.50	19.50
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Slide Proj., TDC Model 300-A	79.00	39.50
Screen 40x40 Beaded Tripod	19.50	11.25

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Retina II—B CRF Synchro F2 Ctd. Xenon	235.00	129.00
Leica Standard Elmar F3.5	385.00	55.00
Leica III-C Ctd. F2—Summitar	385.00	229.00
Boisey B CRF Ctd. F3.2	55.90	37.50
Contax II-A CRF Synchro F2 Sonnar	417.00	269.00
Retina II-A CRF Elmar F3.5	140.00	89.00
Voightlander Bessa CRF Helomar F3.5	130.00	69.00
Voightlander Bessa CRF Skopar F3.5	140.00	75.00
Super Ikonta A Special Zeiss F3.5	150.00	89.00
Exakta B 1/1000 Speeds Trioplan F1.9	140.00	99.50
Exakta B Zeiss Biotar	295.00	129.00
Super Ikonta BX Ctd. Tessor 2.8	287.00	159.00
Robert II Xenon F2	250.00	69.00
Korolle Reflex II Tessor F2.8	165.00	100.00
Superb Reflex 2 1/2 x 2 1/4 Skopar F3.5	120.00	68.00
Kodak Reflex Synchro F3.5	137.00	69.00
8mm Franklin F2.5 Magazine	\$127.00	\$ 49.50
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16mm Keystone A-7 F2.5	74.50	51.50
16mm Bell & Howell Autoload F2.5	177.00	108.00
16mm Bell & Howell 70 DA F1.5 Cooke	359.00	225.00
16mm Simplex Pockette Mag. F3	79.00	28.00
16mm Lektro Model A F1.9 Mag.	179.00	99.00
16mm Lektro Model A F2.5 Mag.	127.50	69.50
16mm Keystone Model B F3.5	49.50	18.50
16mm Concox F2.5	74.50	41.50

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Contax I Sonnar F2	\$186.00	\$ 79.00
Kodak Tourist F4.5 Ctd.	71.32	54.00
Contax II CRF Sonnar F2—case	300.00	129.00
Contax III Built in Exposure meter, Sonnar F2—case	350.00	159.00
Ikonflex III Tessor F2.8—case	325.00	149.00
2 1/4 x 3 1/4 Speed Graphic CRF, Optar F4.5 Ctd. Flashgun	291.00	129.00
3 1/4 x 4 1/4 Speed Graphic CRF, Elmar F4.5, Flashgun	300.00	165.00
4x5 Busch Pressman, Full Vue Focus Comp B Tessor F4.5, Gun	320.00	169.00
9x12 Voightlander, Skopar F4.5	65.00	35.00
9x12 Linhoff, Tessor F4.5	225.00	119.00
Keystone K-8 F2.5 8mm	67.50	23.50
Kodak Model 20 F3.5 8mm	55.00	28.50
Eumig, Built in Exposure Meter	99.50	49.50
8mm Revere Turret F2.8	99.50	51.75
Kodak F1.9 Magazine 8mm	147.50	107.00
8mm Briskin F2.5 Magazine	99.50	41.75
Revere Magazine F2.5 8mm	87.50	61.75
8mm Revere F3.5 Magazine	49.50	29.95
16mm Revere Turret F2.5	\$179.50	\$112.00
8mm Kodak 33 Proj 500 W	65.00	43.00
8mm Keystone R-8 500 W	84.50	45.00
8mm Kodak 90 750 W	175.00	125.00
8mm Keystone K-108 750 W	129.50	85.00
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# Photography can be a wonderful hobby . . .

***But Sometimes it Takes Courage***

You can't keep a good photographer down—even when he's flat on his back. Take Linton B. Salmon for instance. For months, he was forced to stare at the ceiling in his ward at the Bronx Veterans Administration Hospital, and when he wasn't staring at the ceiling, he was staring downward at the floor. He was and is suffering from a spine injury and can't rest in any position except flat on his back or on his stomach.

Salmon was a biological photographer before World War II and his injury. For a while he despaired of ever holding a camera in his hands again except to examine it.

The Volunteer Service Photographers, a civilian organization dedicated to rehabilitation through photography, thought differently.

Ever since the war they had been teaching disabled veterans how to take photographs for a hobby. Where veterans were unable to hold a camera, they were taught print coloring with oils. For veterans who couldn't leave their beds, special portable darkrooms were designed and built. Private sources continued to keep the organization rolling until most of the veterans hospitals in the New York area had photographic divisions run by the VSP.



**Contest winner Salmon and camera**

Although Salmon was unable to leave his bed, he was able to prop himself up slightly when on his back or shoot over his head when on his stomach. As the nurses wheeled him from place to place on his stretcher, he carried his camera with him.

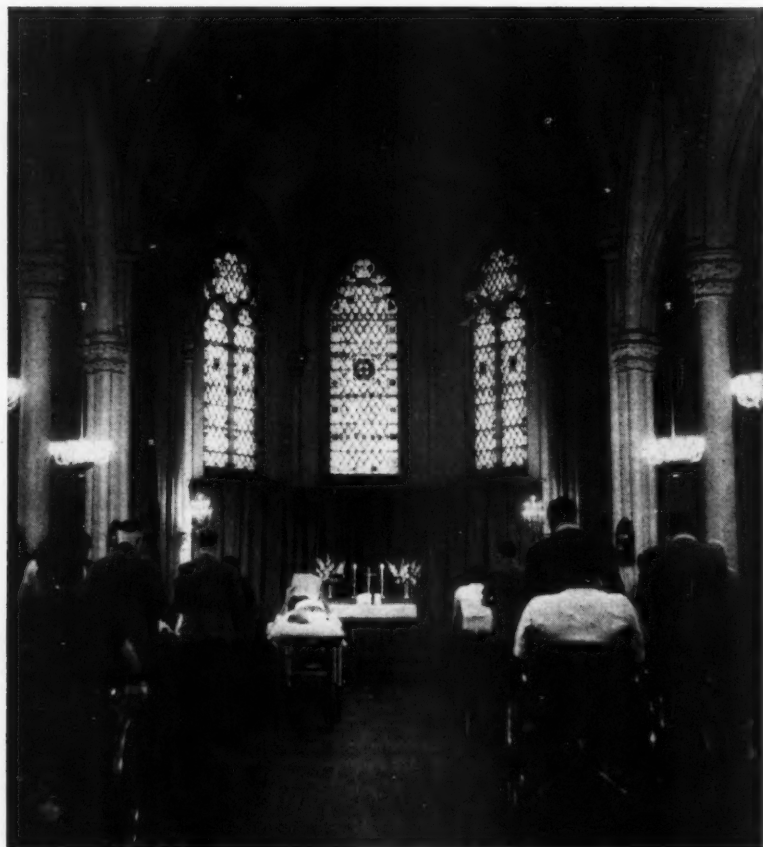
One Sunday while in the chapel at the hospital, he was struck by the architectural splendor as contrasted with the hospitalized veterans, some on stretchers in the aisle. Salmon, with his ever-present camera, shot towards the altar from his position flat on his stomach.

We catch up with the story a few months later at an exhibition and contest of VSP pictures held at the Miniature Camera Club of New York. The judges, Ivan Dmitri, photographer; Miss Josephine U. Herrick, founder of the VSP, and George duBerg, a former president of the Miniature Camera Club, picked through about 100 semi-finalist prints.

They finally narrowed the selection down to one print, a photograph of the inside of a hospital chapel taken by one Linton B. Salmon of the Bronx Veterans Administration Hospital. He was awarded a Voigtlander Bessa camera. When the judges looked for the photographer of the second place winner (another chapel shot) they discovered the name again was Linton B. Salmon. He was awarded a second camera which he gave to another hospital patient whom he is now instructing in photography.

Like we say, you can't keep a good photographer down—not for long anyhow.—Herbert Keppler

**At left:** Using only the natural light coming through the windows and the artificial lights of the hospital chapel, Linton B. Salmon took this first prize winner while flat on his stomach on a stretcher similar to the one in aisle.





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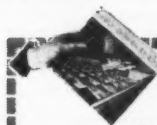


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# What's Ahead?

by LLOYD E. VARDEN



With the coming of high-speed pan films, and later, color materials for home processing, photographers were compelled to struggle through most of their darkroom chores in absolute darkness. The once useful dark-green safelight provided enough light—after the eye became adapted—to give one confidence in carrying out the most intricate of darkroom manipulations with slower or less color sensitive materials. Today, though, when a high-speed pan or color film jams, for example, while loading it into a developing reel, about all that can be done is to start from scratch and hope for the best. To turn on a safelight is inviting disaster.

## Seeing in the dark

During the war, reports leaked out that soldiers had been given devices enabling accurate rifle fire in complete darkness. The secrecy was not entire-

ly warranted, because as early as 1934 disclosures had been made in the scientific literature on converting invisible infrared radiation to visible light. The now well-known *snooper scope* and *sniperscope* employed this principle. An infrared searchlight, which the enemy could not see, "illuminated" the field of observation. The scope contained a lens system that projected an infrared image of the scene onto the photo-cathode of an electrostatic image tube. Electrons emitted from the infrared sensitive surface were then focused by the tube onto a small fluorescent screen, producing a visible image that was observed through a magnifying eyepiece. The principle involved is made clearer in Figure 1.

It is obvious that an instrument of such novelty should find peace-time applications. Immediately after the war, for example, Pavelle Color Inc. purchased a surplus military infrared

telescope in the hope that it could be adapted for "seeing" in the pitch black darkness of color processing darkrooms. The instrument was relatively small, and was easily refocused for close-up viewing. It operated from an ordinary 115 volt electric line, and provided an amazingly brilliant image when the area under observation was illuminated by a 150 watt tungsten filament lamp, housed to emit radiation only through a Wratten No. 87 infrared filter. Sufficiently fine detail could be observed to carry out nearly any darkroom operation. (Written instructions on a sheet of paper could be read with ease.) It appeared as though the difficulties that arise from working in complete darkness would soon be a thing of the past.

## Fundamental problems involved

The application of the infrared image tube for general photographic purposes is restricted by at least two fundamental problems. First, many photographic emulsions, after exposure in the camera, exhibit an image reversal when exposed to infrared radiation. This is known as the Herschel effect. Second, lightweight devices that can be worn as goggles in the darkroom, with a built-in battery power supply, are not available. However, the Type Z helmet infrared binocular met such requirements for military purposes.

The first of these problems could no doubt be overcome by limiting the viewing times in the darkroom to a minimum, or by reducing in other ways the amount of infrared radiation reaching the film. The second problem is technically not a problem at all. It is simply a question of economics, as to whether or not an enterprising firm could sell enough devices at a necessarily high price to justify the development costs. In time, however, both of these obstacles may be less important than at present, and it may be commonplace to use special goggles for seeing almost as well in the darkroom as in white light.

## A different approach

Another approach to seeing in the dark was recently described by C. M. Tuttle of the Eastman Kodak Co. in U. S. Patent 2,521,953. Tuttle makes use of an infrared source and phosphorescent substances, but the visible image is formed in a manner different from the image tube. He takes advantage of the fact that infrared radiation can be employed to stimulate the fluorescence of a previously excited phosphor, i.e., one that has been exposed to ultraviolet radiation, for example, so that the brightness of the fluorescence increases with the amount of infrared the phosphor receives. Or, by proper choice of the phosphor, the infrared can be used to quench, or "put out" the fluorescence previously produced by an ultraviolet source. Now, by means of a rotating phosphor-coated surface enclosed in a box with

(Continued on page 22)

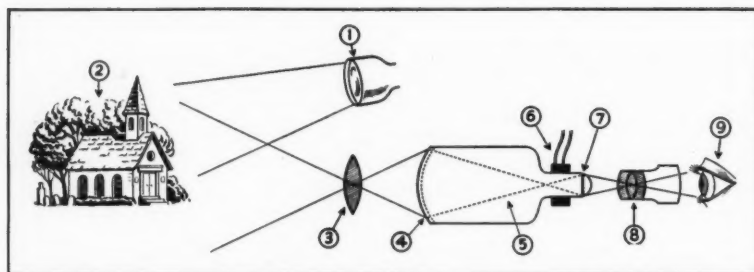
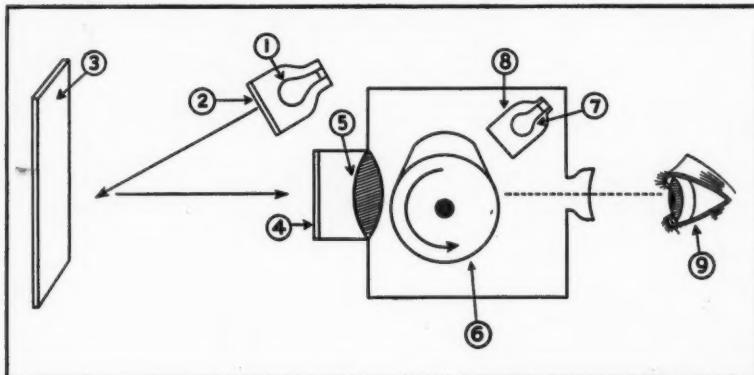


Fig. 1, above: Invisible radiation is projected by infrared searchlight (1) onto scene (2), reflected to lens (3) and onto infrared sensitive photo-cathode (4). Electron beam is focused electrostatically by image tube (5) which gets its power from (6). Fluorescent screen (7) shows image, seen through viewing lens (8) by human eye (9). Fig. 2, below: Infrared source (1) projects beam through infrared filter (2) onto sheet of film to be observed (3). Rays are reflected through infrared filter (4), lens (5), and onto phosphor-coated surface of rotating cylinder (6) which has previously been exposed to rays from ultra-violet source (7) in reflector (8). Image thus becomes visible to human eye (9). This is principle of Tuttle's device.



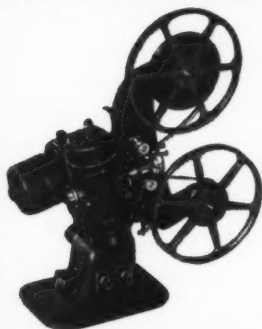
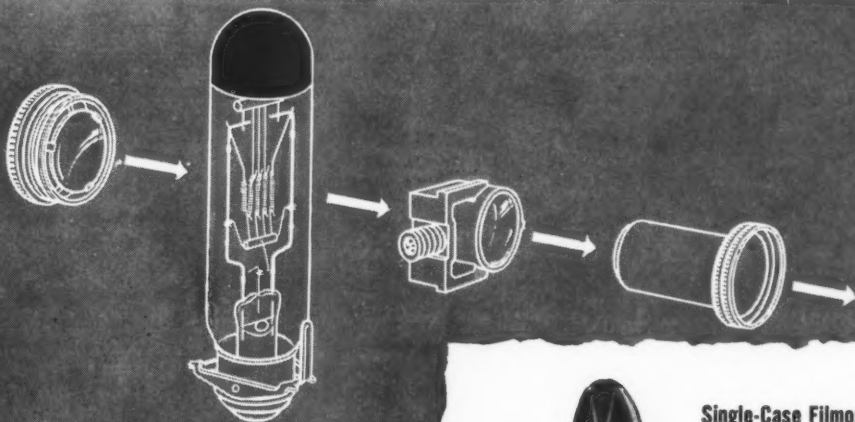
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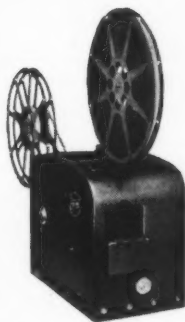
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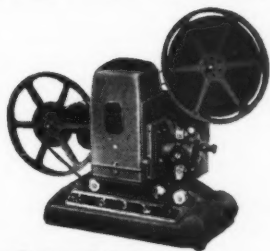
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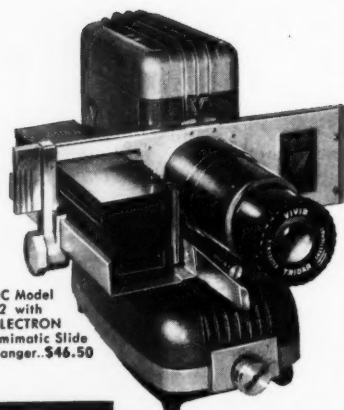
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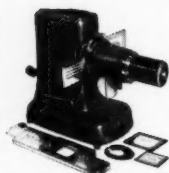


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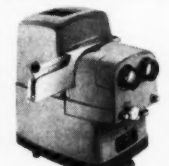


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# Camera Carrousel

by JACOB DESCHIN



## He liked girls

Forman Hanna, the little pharmacist of Globe, Arizona, whose nudes of young girls made him internationally famous in salons, died recently. When Hanna was in town about a year ago I asked him what got him started on the subject. His reply was refreshingly honest. Seems he worked in a factory once where young women were employed. As they moved about the shop he admired the grace, vitality and delicate charm of the youthful female forms. When he quit the factory and started his drug store, having by this time acquired the camera hobby, he found courage eventually to ask attractive teen-agers who came to his shop to pose for him in the nude in a nearby mountain setting. He was such a nice guy you couldn't refuse him; besides, it seemed like a compliment, which it was, the way he put it. At first, the mothers used to come along.

Later, as he became better known and his pictures began to be exhibited all over the world and reproduced in photographic publications, the mothers stayed home. Hanna didn't give me any phony talk about "art". It was simply that he liked girls and the way the soft morning light outlined and modeled their youthful figures. "The Moon Maiden", one of his most successful prints (salon-wise), is reproduced here, cropped slightly.

## Club for the deaf

There's a unique camera club in my town—it's called the New York Cine and Camera Club of the Deaf and is said to be the only group of its kind in the country (let me know if you beg to differ). I visited a meeting of theirs recently and found them no different from any other club, complete with heated argument and disagreement, but wonderful enthusiasm. I even got involved as color slide judge along with two of the members. We all had fun and understood each other—eventually. Just goes to show you. They aren't kidding when they say photography has a language of its own.

## Fashion note

Ingeborg de Beausacq, charming New Yorker, formerly of Brazil, recently told a camera club why being a woman helps her to make better fashion pictures and portraits of other women.

"Being a woman," she said, "I know through my own experience not only how to wear a dress, but I know how a dress can influence my whole personality, change it for the time I wear the dress. I walk, talk, think differently in an evening dress than in slacks. During the summer, I had very short hair, I had to compose my whole face in a different way, had to change my expressions to go with the short hair. All these little things I live through and have fun with, are automatically in my mind when I do a fashion picture, for example. Or if I have to do the portrait of a woman. I feel the dress the model has on and know how she should behave in it. That's why I never tell a model what to do but how to feel. I put her in the mood of the dress, the fur, the suit."

In other words, being a woman is like being a chameleon? Or an emotional manikin. No thanks!—THE END



Hanna's photo "The Moon Maiden."



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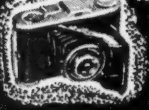
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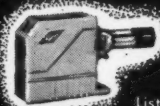
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3 1/2x4 1/2 KALARI, 127mm f4.5 Ctd. Wolfenbut, combined range Finder and View Finder, focuspot, built-in flash	179.50
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9x12 LINHOF, Kalari Range Finder, 127mm f4.7 EKTAR, Supermatic	149.50
4x5 BUSCH PRESSMAN, f4.5 Tessar	89.50
4x5 B&J PRESS, f4.5, Wolfenbut, coupled R.F., solenoid, gun	99.50
4x5 Pacemaker SPEED GRAPHIC, f4.7, Kalari R.F., solenoid, gun	189.50
4x5 SPEED GRAPHIC, f4.5, Kalari rangefinder, synchronizer	139.50

Average Shipping Weight 13 lbs.

### Used ENLARGERS

DEJUR PROFESSIONAL, 4x5, f4.5	119.50
DEJUR VERSATILE II, takes up to 2 1/2x3 1/2, condenser, 2 1/2" f4.5 lens	69.50
DEJUR VERSATILE I, takes up to 2 1/2x3 1/2, condenser, 3 1/2" f4.5 lens	89.50
ELWOOD STUDIO 5-2, 5x7, 100 W.	54.50
ELWOOD SP-2, 5x7, 200 Watts	84.50
FEDERAL 135, 35mm, f4.5, condenser	37.50
FEDERAL 249, 2 1/2x3 1/2, f6.3 lens, condenser included	22.95
FEDERAL 315, 2 1/2x3 1/2, f4.5 lens, condenser included	62.50
FEDERAL 450, 4x5, f6.3, f8.3	84.50
KODAK PRECISION, 2 1/2x3 1/2, cond.	79.50
OMEGA B4, up to 2 1/2x3 1/2, with condenser	77.50

OMEGA D1, up to 4x5, with 5 1/2" lens

Average Shipping Weight 60 lbs.

### Used SLIDE PROJECTORS

ARGUS PA, 100 Watts, 2x2	16.95
ARGUS PA, 200 Watts, 2x2	21.95
B&H DUOMASTER, 300W, 2x2, case	69.50
GOLDE MASTER, 500 Watts, takes up to 3 1/2x4 1/2 slides	47.50
GOLDE REFLEX, 300 Watts, 2 1/2x2 1/2	49.95
KODASLIDE 1A, 100 Watts, 2x2	18.95
KODASLIDE 2A, 150 Watts, 2x2	32.50
KODASLIDE TABLE VIEWER	69.50
KODASLIDE 4X TABLE VIEWER, Latest Brand New	47.50
LA BELLE, 500 Watts, 2x2, automatic slide changer, blower	59.50
SKAN, 100 W, 2x2, blower cooled	16.95
SKAN, 200 W, 2x2, blower cooled	24.50
SVE Model AAA, 300 Watts, 2x3 slides and 35mm strip film	49.50
TDC STEREO, 500 Watts, blower	119.50
VIEWLEX AP-5, 150 W, 2 1/2x2 1/2	24.95

Average Shipping Weight 10 lbs.

### Used SOUND PROJECTORS

AMPRO CENTURY 5, 750 Watts	195.00
BELL & HOWELL 138, Sound-Silent	139.50
BELL & HOWELL 179, Sound-Silent	225.00
KODASCOPE 1840, Sound-Silent	189.50
NATCO 3030, Lightweight, 2" f1.6	179.50
REVERE, Lightweight, 750 Watts	179.50
VICTOR 60C, Sound-Silent	295.00

Average Shipping Weight 60 lbs.

SAVE \$89.08

Omega D2

4x5 Enlarger

• 5 1/2" f4.5 Lens

• Double

Condenser

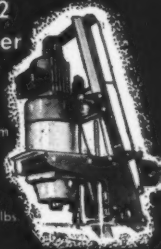
Lighting System

• List \$238.58

149.50

used

Shp. wt. 50 lbs.



### Used 8mm CAMERAS

B&H FILMO SPORTSTER, f2.5	59.50
B&H MAGAZINE-8, ctd. f1.9, latest	119.50
B&H AUTO-8, turret, 1 1/2" f1.9 ctd., 1 1/2" f3.5 telephoto ctd., focusing lenses, matching viewfinder	174.50
BOLEX 18, 1 1/2" f2.8 Kern Varo lens	59.50
BOLEX H-8, 1 1/2" f1.9, 3-lens turret	169.50
BOLEX H-8, 1 1/2" f1.9 Barthlot, 1" f1.5 Xenotar, 1 1/2" f1.9 Dallmeyer	259.00
CINE KODAK 8-35, f2.7	37.50
CINE KODAK MAGAZINE 8, f1.9	99.50
DEJUR CITATION, f2.5, roll-loading	42.50
DEJUR MAGAZINE, f2.5 ctd.	69.50
KEYSTONE K8, f2.5 Wolfenbut	39.50
KEYSTONE K36, f1.9 ctd.	47.50
KEYSTONE OLYMPIA, f1.9 ctd. lens	57.50
KEYSTONE K22, f1.9 ctd. focusing	59.50
REVERE 55, f2.8 lens	44.50
REVERE RANGER, f2.5 ctd.	37.50
REVERE 88, f2.5 Wolfenbut	44.50
REVERE 99, turret, f2.8 and 1 1/2" f3.5 focusing telephoto lens	89.95
REVERE MAGAZINE, turret (2-lens) f2.8 ctd. Bausch & Lomb lens	79.50

Average Shipping Weight 9 lbs.

### Used 8mm PROJECTORS

B&H FILMOMASTER, 400 Watts	99.50
B&H PICTUREMASTER, 750 W, latest	174.50
B&H REGENT, 500 Watts	99.50
DEJUR, 750 W, still and reverse	89.50
DEJUR, 1000W, 750 W	99.50
KEYSTONE R8, 500 Watts	47.50
KEYSTONE K-108, 750 W	79.50
KODASCOPE R-33, 500 Watts	44.50
REVERE 90 Deluxe	79.50

Average Shipping Weight 25 lbs.

### Used 16mm CAMERAS

B&H AUTOLOAD, Magazine, f1.9	119.50
BELL & HOWELL 70-D, case, 3" f3.5 lens, 20mm f1.9 Leuch, 1" f1.5 Meyer lens in focusing mount	169.50
B&H FILMO 70DA Outfit, ctd. 1" f1.9, ctd. 3" f3.5, ctd. 17mm f2.7	279.00
BOLEX H-16, built-in frame counter, ctd. 1" f1.9, ctd. 3" f3.5, ctd. 17mm f2.7—all lenses NEW	295.00
CINE KODAK 8, f1.9 focusing lens	49.50
CINE KODAK K, f1.9 focusing lens	79.50
CINE KODAK MAGAZINE-16, f1.9	99.50
KEYSTONE A7 (7 speed), f1.9	42.50
KEYSTONE A-12, turret, f2.5 ctd.	49.50
KEYSTONE K-50, Mag., f2.5 ctd.	79.50
REVERE 16, Magazine, ctd. f1.9 for 100.50	99.50
REVERE 16, Mag., turret, ctd. f2.7	99.50
VICTOR 4, 3-lens turret, f1.9	119.50

Average Shipping Weight 15 lbs.

### Used 16mm PROJECTORS

AMPRO, 750 Watts	89.50
BELL & HOWELL 57, 400 Watts	49.50
B&H DIPLOMAT, 750 W	159.50
B&H SHOWMASTER, 750 W	189.50
KEYSTONE A-72, 500 Watts	39.50
KEYSTONE K-160, 750 Watts	77.50
KODASCOPE 16-20, 750 Watts	129.50
REVERE 48, 750 Watts	89.50

Average Shipping Weight 35 lbs.

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FAST ACTION!



2 1/4 x 3 1/4  
MINIATURE  
SPEED GRAPHIC  
OUTFIT

• f4.5 Kodak Lens  
• Kalari Rangefinder  
• Synchro Flashgun  
• Excellent Condition

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109.50

used

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Latest Model

ARGUS C3  
35mm Outfit

• ARGUS C3 Camera  
• f3.5 Coated Lens  
• Coupled Rangefinder  
• SYNCHRO FLASHGUN  
• EVEREADY CASE  
• List \$66.50



39.95

used

Shp. wt. 7 lbs.

2 x 2  
Complete  
SLIDE PROJECTOR  
OUTFIT

• FAMOUS MAKE  
PROJECTOR  
(35mm and Ban-  
tam) 100 Watts

30x40 Crystal Beaded

• SLIDE FILE, all metal

for 150 Glass or 300

Readymounts

BRAND NEW

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Shp. wt. 18 lbs.

FREE Set of 26 A to Z Slides

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Latest 1950 Model

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with 3

Coated Lenses

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Coated Lens

• 35mm f3.5 Coated

Elmar Wide Angle

Lens

• 90mm f4 Elmar

Coated Telephoto

• When New \$663.40



399.00

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Postpaid



SAVE \$40.00

KEYSTONE A82

16mm Projector

• 750 watt Lamp

• Reverse-Still

• List \$99.50

Shp. wt. 15 lbs.

Like New

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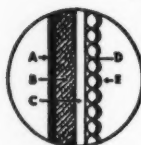
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## ATOMIC RADIATION MEASURING DEVICE USES LAND POLAROID CAMERA PRINCIPLE

The self-developing photographic process used in the Land Polaroid camera has been adapted by the Army Signal Corps to measure atomic radiation.

The army claims that the new device, called a dosimeter, is the first simple and inexpensive method of measuring the extent of exposure of individuals to atomic radiation for both military and possible civilian needs. The instrument is small and light and may be hung around one's neck like a dog tag.

A reading can be obtained from the dosimeter one minute after exposure, without recourse to a photographic laboratory or the use of supplementary equipment. Because it works on a photographic principle, the dosimeter's sensitivity can be changed simply by altering the type of photographic emulsion used.

The dosimeter consists of a small metal case containing a flat paper package. The package, or plaque, in turn contains photographically sensitized film and a pod of developing solution. The film has graduated scales on its outer edges and an unexposed center part. Exposure to gamma radiation causes the center strip to turn light—the greater the exposure, the whiter the strip. By comparing the center strip with the graded scale on the edges, a good measure of the dosage of radiation received by the dosimeter's user can be made. Shielding in the case blocks out alpha and beta radiation, since gamma rays are the ones to be reckoned with in an atomic explosion.

When an individual suspects that he has been exposed to dangerous radiation, he merely pulls a tab from the case. The tab is attached to the film plaque, which is removed. As the plaque passes

through a narrow slit in the case, it breaks the pod containing the photographic developing fluids, and spreads the chemicals over the test strip and scale inside the plaque. The user waits approximately one minute, breaks open the plaque, examines the test strip and scale, and learns the extent of his exposure.

Steps are being taken to initiate pilot production of the device for military use. Large quantities will not be available for at least six months.—THE END

## PHOTOGS TO WIN, TOO, IN COVER GIRL CONTEST

Asserting that an American girl who possesses beauty should not have to sing, dance, or do cartwheels in order to qualify for contest competition, the publishers of *Cover Girls Models* have launched a nation-wide contest in which beauty alone will entitle any girl to compete. The title at stake is that of "Miss Cover Girl," and winners in both local and nation-wide contests, as well as the photographers who sponsor them, will receive cash prizes.

A photographer, amateur or professional, may enter as many pictures of the girl he is sponsoring as he likes. Each picture must be 8 x 10 in size and present a full-figure image in a bathing suit. In local contests, the girl judged Miss Cover Girl in each city will receive \$100, and a similar prize will be awarded the photographer sponsoring her. In the nation-wide contest, the winning girl and her photographer will each receive \$1000. All Contest Entries should be addressed to: Miss Cover Girl Contest, Models Publishing Co., 745 Fifth Avenue, New York 22, New York.

### WHAT'S AHEAD?

(Continued from page 16)

an ultraviolet source, and with a lens on one side and a viewing hole on the opposite side, it is possible to illuminate a light sensitive material with infrared and view its visible fluorescent image. One such device described by Tuttle for inspecting film during manufacture is shown in Figure 2. The rotating phosphor-coated surface passes the ultraviolet source where it is excited. It then passes the infrared image formed by the lens where, depending upon the phosphor used, the fluorescence of the rotating surface is stimulated or quenched according to the amount of infrared radiation strik-

ing any particular point. The image produced remains on the surface long enough to be viewed through the peephole before reaching the ultraviolet source again. With one type of phosphor a negative image is produced, and with the other, a positive image. A device based on this principle could be made fairly compact and at much less cost than one incorporating an electronic image tube. Whichever approach is taken, there is no reason why photographers cannot expect to "see in the dark" in the darkroom of the future.—THE END.

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**JOIN THE MARCH OF DIMES**

# WOLLENSAK RAPAX SHUTTERS

have **GREATER PRECISION,**  
**STRENGTH** and **SMOOTHNESS**  
than the finest watch



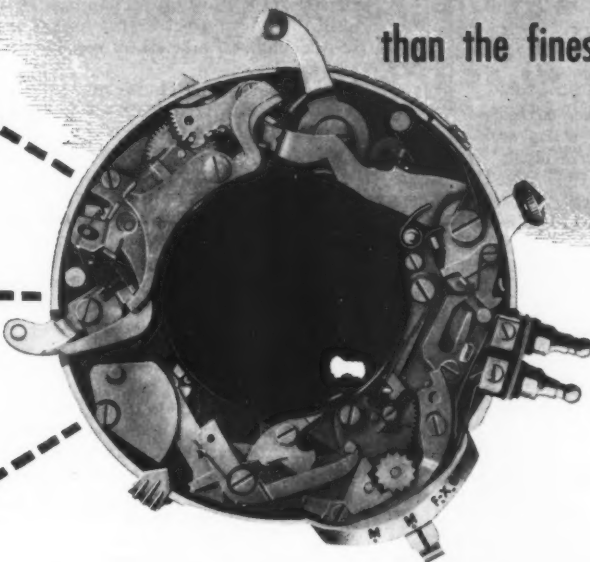
Contact quality (bounce) check on Oscillograph



Checking shutter speeds, synchronization and duration of contact with Interval Meter



Shutter assembly is done with painstaking care



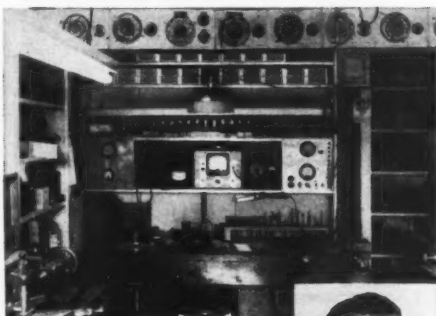
The only **FULL** Synchromatic Shutter made where  
Shutter and Synchronizer are cocked with one  
lever, in one operation

The internal mechanism of photographic shutters are frequently compared with fine watches. Both are precisely made and assembled . . . both measure time, but here the comparison ends. A watch ticks off seconds in smooth repetitive fashion, whereas a shutter expands its energy in as short a space as one thousandth of a second. Thus a shutter must not only be extremely accurate but very rugged to stand the terrifically rapid release of energy in its fine mechanism. Yet thousands of Wollensak shutters have given years of dependable service.

Wollensak shutters contain over 150 moving parts machined to fine tolerances and assembled with extreme care. To insure the smooth working of these fine shutters they are subjected to test after test. Oscillographs check for contact bounce . . . interval meters check shutter speeds, synchronization and duration of contact . . . a series of special instruments check insulation and shorts, blade bounce, spring tensions and other internal movements.

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"Since we service dealers we get a good idea of the outstanding photographic products in the field. Wollensak is tops. In fact, I think all the local photographers here in the Northwest would bet on Wollensak products. In addition the company gives splendid service and stands back of all its products. This is mighty important to us middlemen."

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MEANS FINE LENSES

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No messy mixing of chemicals. No fear of too strong or too weak a solution. Perfect darkroom results every time — when you use FR Prepared Liquid Chemicals. Scientifically prepared and laboratory pre-tested, FR Liquid Chemicals remove all bother, all guesswork from developing and printing. All you have to do to put them to use is remove the cap!



## New photo books

**PHOTOGRAPHIC OPTICS**, by Allen R. Greenleaf. The Macmillan Co. 214 pages. Price \$4.75.

There are few subjects quite as confused, and confusing, as photographic optics; sometimes it seems as bad as the problem of how to fill out income tax blanks.

For years, the photographer who wondered just what his camera lens actually did could either wade through gigantic tomes or keep on wondering.

The only adverse criticism of Mr. Greenleaf is that he didn't write the book sooner. For, in his volume, the amateur or professional photographer can study the history of lenses, the theory of lens stops, resolving power, aberrations, perspective, reflection, refraction and dispersion without the aid of aspirin.

The book is not only a handy reference guide but also a fascinating story (to read) from cover to cover. True, Mr. Greenleaf does use a number of diagrams for the more curious, but the book can be appreciated without too much reference to them.

Mr. Greenleaf explains the differences between the various brand names of lenses and furnishes descriptions of their performing properties. He also dedicates a chapter to choosing and testing lenses as well as to shutters and camera accessories such as viewfinders and rangefinders.

Somehow, Mr. Greenleaf has managed to cram all this information into a slim 214-page book. It should be found on the bookshelves of every serious photographer.—H. K.

**IF YOU ARE CONSIDERING A CAREER IN PHOTOGRAPHY**, by C. B. Neblette. Rochester Institute of Technology. Price ten cents.

Interested in becoming a professional photographer? Better read line five, page eight of this booklet first. The author there advises, "One must not expect success easily or quickly." A lot of disappointment and heartache would be saved if more would-be professionals were given more such advice—and heeded it.

The 35-page booklet is also quite a mine of information for the photographer who isn't sure in what field he would like to specialize. The booklet, of course, can't choose the field for him, but it does list most of the photographic fields plus the necessary qualifications and starting positions.

If any quarrel can be picked with the author, it is in regard to these starting positions. He lists many as "assistant photographer or laboratory assistant." While it is true, some photographers may be able to start thus, a lot miss big opportunities which may start on a lower level—copy boy, messenger, or photo file clerk.—H. K.

**UNIVERSAL PHOTO ALMANAC 1951**. Folk Publishing Co., 10 W. 33 St., New York 1, N. Y. Price \$1.75.

The 1951 Almanac, edited by Ralph Samuels, seems to us to stand head and shoulders above its predecessors. Divided into two sections, the first 128 pages are devoted to exceptionally well-illustrated articles by Ansel Adams, Jacob Deschin, Minor White, Ralph Samuels, Berenice Abbott, Beaumont Newhall, T. H. Dick, Martin Munkacsy, Henrietta Brackman, I. R. Daskoff, Lloyd Varden, Russell Holslag, and John R. Whiting. Also included in this section is a 20-page portfolio of prints by various contributors.

The remaining half of the Almanac, from page 129 to 258, is a formulary and data section which covers cine, and color data as well as processing charts, formulas, and relevant data on black-and-white work. Good printing on glossy paper stock, together with subject matter ranging from 35mm work to the photographic philosophy of Weston and Adams, combine to make the '51 Almanac well-balanced.—A. W. A.

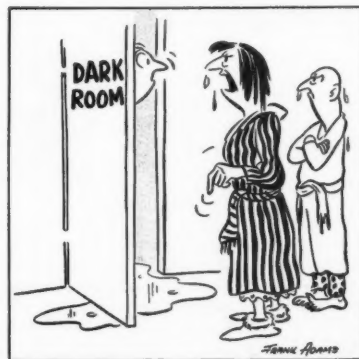
**GALLERY OF AMERICAN DOGS**. Text by Harry Miller, photographs by Arthur S. and Katherine Holt Mawhinney and drawings by Paul Brown. McGraw-Hill Book Co. Price \$7.50.

It's one thing to line your favorite dog, Towser or Rover or Fido, against a suitable background and shoot a picture or two of him. It's another to photograph 120 highly-bred canines, each of a different breed, entirely unknown to the photographer.

The compilation was not easy. It took twelve years for the Mawhinneys to select the best dog of each breed, find the owner, make arrangements for photographing and finally do the job.

For the record, the photographers used a Leica camera with a 90mm lens. The film, Panatomic X, was exposed by flashlamp, developed in X-33 or Harvey's 777. None of the photographs were retouched.

A description of each breed, its history and physical appearance by Mr. Miller accompanies each of the full-page gravure dog portraits.—H. K.



"We're the people from downstairs."





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Latest Model! Top Grade Condition!  
**Zeiss SUPER IKONTA "A" Special**  
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**Built-In Flash  
Synchronization**  
**\$99.50**  
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**BRAND NEW KINE EXAKTA II**  
Built-In Flash  
Synchronization **35mm REFLEX CAMERA**



**"T" Coated Zeiss BIOTAR f2 Lens**  
Shutter Speeds: 12 secs. to 1/1000th  
Delayed Action - Lens Interchangeability  
With "T" Coated  
Zeiss Tessar f3.5 Lens... **\$118.00**

Leather Eveready Case  
(with camera only)..... \$7.50  
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Extension Tube Set (3 tubes: 7,  
15 and 30 mm) with Camera  
and Lens Adapters ..... \$15.75  
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**Wirgin ADOX II**  
35mm CAMERA

**\$54.50**  
New



Built-In Flash  
Synchronization  
Coated Xenon f2 Lens. Synchro  
Compur Rapid. Speeds: 1 to 1/500  
—with Coated f2.9 Lens. • **Syn-  
chro Prontor II Shutter.....\$29.50**  
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Filters (VI) ..... ea. \$2.65  
Heiland Synchro-Mite  
Flash Unit ..... \$10.95

Brand New **DALITE**

**CRYSTAL BEADED  
PORTABLE  
TRIPOD SCREENS**



Size	Type	Special
30 x 40	"Comet"	\$ 9.49
40 x 40	"Comet"	\$11.59
37 x 50	"Top-Flight"	\$12.95

**VICEROY  
ALL-METAL DARKROOM  
SAFELIGHT**

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\$3.50 Value  
Special **\$1.95**



Supplied with two filters: Yel-  
low Green for printing and en-  
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processing. Fits household  
light receptacle and uses  
standard 10 watt bulb (not  
supplied). May be used with  
Brownie Safelight Filters.

Brand New  
**SVE SLIDETTE**  
SLIDE PROJECTOR



- for 2x2 (35mm) slides
- 150 watt illumination
- 5-inch lens
- condenser optical system
- tilt adjustment
- carrying container

Reg. \$27.75  
**SPECIAL \$16.95**

**TESTRITE  
ROLL-FILM TANK**

**SPECIAL  
\$1.79**



**\$3.00 Value**

Adjustable from 35mm to 116  
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—ideal for Color Processing.

## TOP FLIGHT GADGETS BAGS

Available in both Genuine Leather and Texhide. The Leather Bags are made of genuine top-grain cowhide with subdivisions to accommodate camera, meter, flash, filters, etc., and a roomy outer pocket for miscellaneous accessories.

Has zipper for complete protection under all weather conditions and easy access to contents. All seams reinforced, bottoms and sides stiffened and bottoms brass-studded for longer wear.

The Texhide Bags are made of vinyl plastic-laminated fabrics with the durability and texture of leather.

Features are the same as in leather models.

(Dimensions do not include outer pocket)

### LEATHER BAGS:

Model L-5. 8x10x3 inches . . . for most 35mm, reflex,  
folding and other still cameras as well as 8mm  
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tripod straps under the bag. Value \$48.80 . . . **\$29.04**

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Model P-10. Same as Model L-10. . . . **\$10.50**



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**MINOX II**  
CAMERA

*The King of Mini-Miniatures*

Coated f3.5 Lens.  
Shutter Speeds  
1/2 to 1/1000th  
sec. Focuses from  
7 inches to infinity.  
Built-In Filters.  
Weights only  
2 1/2 ozs. Supplied  
with case and  
measuring chain.



**Special \$67.50**

MINOX FILM Black & White  
per 50 exp. cartridge... \$ .98  
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cartridge ..... \$1.19

Brand New Appearance!  
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**RETINA II B**  
35mm Camera



**Built-In Flash \$127.50**  
Synchronization

Coated XENON f2 Lens  
Synchro Compur Rapid  
Speeds: 1 to 1/500th sec.  
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An all-leather all-purpose  
gadget bag with features  
found in more expensive  
types. Dimen-  
sions: 8x10x3 ins.

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## EXCERPT FROM A CUSTOMER'S LETTER

"I have just returned from a trip to the West Indies and took along my new Chronos Light Meter. I would have been grateful for it were it for nothing else but the tremendous difference in weight compared with my old meter. But to have the box of slides awaiting me at home, practically all of them perfectly exposed, was the main reason why I'm now completely sold on the Chronos."

*\*Letter available for inspection in our files.*



# THE CHRONOS

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## EXPOSURE METER

*Proven by Test*

This unsolicited letter\* shows that the Chronos can take it under the most exacting circumstances. Constant use in terrific sunlight, moisture and the hard knocks of tropical forests did not impair the extreme accuracy of this sensitive instrument. It's remarkable when you consider that Chronos is featherlight, weighing only 2 ounces.

**IT'S COMPACT.** About the size of a pocket watch and can be carried in watch pocket, shirt pocket or worn on the wrist with equal facility.

**IT'S EASY TO USE.** Simple, accurate calibrated markings on the dial are visible the instant the cover flies open.

**IT CAN STAND HARD KNOCKS.** Has hunting case protection like fine pocket watches and the snap-face lid protects both dial markings and electric cell against bumps, shocks and damage.

**\$24<sup>95</sup>**

Wrist Strap . . . \$2.00

Lapel Chain . . . \$1.50

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**TRADE IN  
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METER**

and we will give you a liberal allowance toward the purchase of a new Chronos.

**MAIL THIS COUPON**

**WILLOUGHBYS, 110 West 32nd Street, New York 1, N. Y.**

Gentlemen: Please let me know the amount you will allow on my \_\_\_\_\_ Exposure Meter toward the purchase of a new Chronos.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

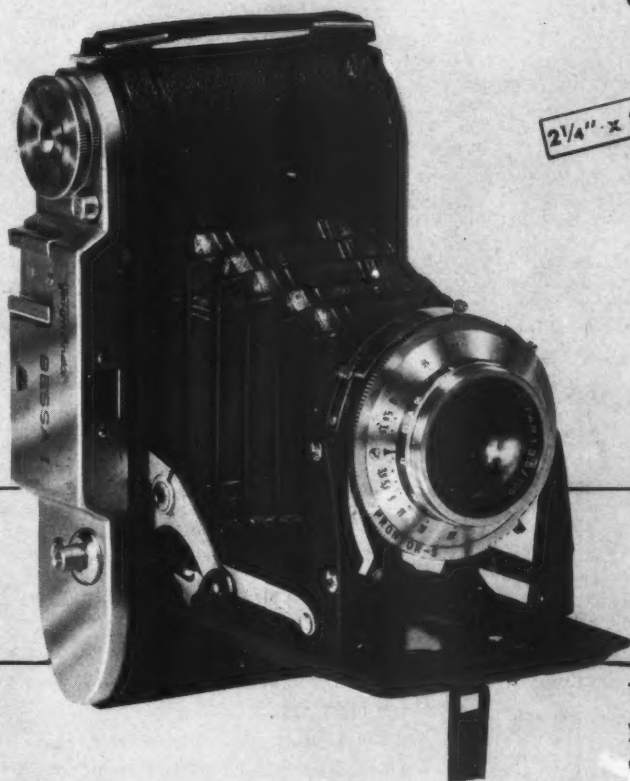
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*Your camera dollar buys much more  
when you purchase the... Voigtländer*



## BESSA 1

with Color-Skopar F3.5 Lens in  
Prontor Synchro Shutter

**\$64<sup>50</sup>**

Also available with F4.5 Vaskar Lens in  
Prontor Synchro Shutter ... **\$49.50**

### ACCESSORIES

Eveready Carrying Case .....	\$8.50
37 mm Yellow Filter .....	4.31
37 mm Focar Portrait Lens .....	4.31
37mm Lens Shade .....	2.87

*Many of its features are  
only found in higher priced  
cameras. These include:*

- Built-in self-timer.
- Built-in flash synchronization.
- Eye-level viewfinder.
- Depth-of-field table on shutter.
- Double exposure protection control.
- Provision to take pocket range finder.
- TAKES TWO SIZE PICTURES ... either eight 2 1/4" x 3 1/4" or sixteen 2 1/4" x 1 1/4" — black and white or full color.
- Has parallax for close-up and distant views for both sizes.
- Extra attractive. Silky chrome satin finish.

This marvelous value is the result of 194 years of "know-how" in making lenses and cameras. There is no other roll film camera like it for design and price. It is compact, handsome, sturdy and ready for instant use.

*Mail orders filled. Add postage. Liberal trade-in allowance on your used camera.*

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*The Camera  
you dreamed about!*

**SENSATIONAL**  
**Voigtlander**  
2 1/4" x 3 1/4"  
**RANGEFINDER**  
**BESSA II**

with Color-Heliar F3.5 Lens

**\$152<sup>50</sup>**

Also available with Color-Skopar F3.5 Lens . . . **\$115.00**

**ACCESSORIES**

Eveready Carrying Case . . . . .	\$8.50
37 mm Yellow Filter . . . . .	4.31
37 mm Focar Portrait Lens . . . . .	4.31
37mm Lens Shade . . . . .	2.87



Every part, from rangefinder to trigger shutter release, is built right into this streamlined camera. All controls are right at your fingertips. Extra-fast lens permits excellent pictures under normal indoor lighting conditions and even theatre and night photos can be taken without flash-gun. The world-famous Voigtlander lens is scientifically coated to eliminate light reflection.

**RANGEFINDER BESSA II HAS  
AMONG ITS OTHER FEATURES:**

- Combined viewfinder and rangefinder of superimposed image type.
- Focusing by moving complete lens.
- New Compur Rapid Shutter.  
Speeds 1 sec. to 1/400th second.
- Flash Synchronization built-in.
- Streamlined for easy handling.
- Rich Satin Chrome finish.
- Genuine leather covering.

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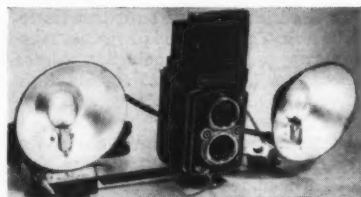
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# new products

## Kalart "B-C" Multiflash

The battery-capacitor circuit of the Multiflash is designed to set off up to six bulbs on extensions totaling 250 feet. The hard rubber case is similar in design to the familiar Kalart Compak flashgun case. In it are a 22½ volt #412 Eveready B battery and a 250 Mfd. capacitor. Overall dimensions are 6¼ x 5 inches.



A series wired circuit for connecting extensions to the power supply is provided with "self-closing" outlets built into the power pack and each extension unit. This feature automatically adds each extension to the series circuit, yet keeps the circuit complete when any extension is removed. However, when extensions are connected, a missing or defective bulb in one extension will prevent the entire system from firing.

Each series extension has two receptacles on the back of its socket. One is for the wire to the power pack; the other is a "self-closing" outlet for connecting another extension. All sockets in the system are the type in which the bulb goes straight in without turning. Bulb can only be removed by pressing the ejector. All types of mounting brackets available.

Prices begin at \$14.95 for shutters with built-in synchronization; some models include external synchronizing devices; extension units are \$10.95.

For further information write to:  
KALART, DEPT. 26 K  
PLAINVILLE, CONN.

## Cine-Kodak Royal Magazine Camera

Kodak's latest 16mm movie camera loads with magazines and has a Kodak f/1.9 Ektar lens which focuses from 12 inches to infinity. Mechanical features include shutter speeds of 16, 24, and 64 frames per second; single frame re-



lease; enclosed optical viewfinder, adjustable to show the field covered by the standard, wide angle and telephoto lenses available for the camera; built-in exposure guide on the side of the camera, covering all three operating speeds.

Price, \$192.50, including tax.  
EASTMAN KODAK CO.  
ROCHESTER 4, N. Y.

## Jet Built-in Flash Installation

This is a standardized flash synchronization installation which will fit most camera shutters. For Compur and similar between-the-lens shutters the price is \$12.95; installations for use with strobe, \$19.95. There is also a unit for focal plane shutters for \$19.95. Descriptive literature is available on request. Write to:

CAMERA CRAFT INC.  
210 NORTH AVE., NEW ROCHELLE, N. Y.

## Praktica 35mm Single Lens Reflex

The Praktica is similar in design to the well-known Praktiflex camera. It has a focal plane shutter with nine speeds from ½ to 1/500 second and bulb. Flash synchronization is built in.

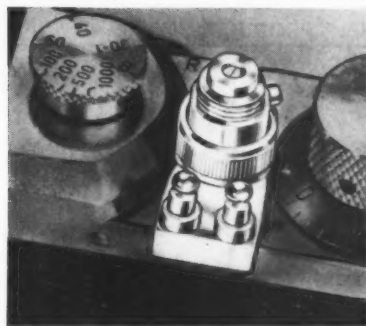


Other features include: coupled film transport and shutter wind mechanism; depth of field scale; eye level sports finder; self erecting viewing hood and mount for interchangeable lenses.

Price, including tax: with f/3.5 Zeiss Tessar "T" coated lens, \$105.50; with f/2 Zeiss Biotar, \$144.50; leather eveready carrying case, \$12.  
KINE CAMERA CO.  
11 WEST 20 ST., NEW YORK 11, N. Y.

## Spectra Synch for Leica

This novel flash synchronizer for use with Leica cameras fits on the body release guard threads and makes use of the rotary motion of this part to provide synchronization. It is designed



for installation by the camera owner, and once set is said to provide accurate synchronization at all speeds up to 1/1000 sec.

Any battery flashgun can be connected to the unit. Due to its small size, it fits inside eveready carrying cases and may be left in position permanently. It will not flash the bulb accidentally when advancing film.

Price, \$17.50.  
PHOTO RESEARCH CORP.  
127 W. ALAMEDA AVE., BURBANK, CALIF.

## Tiffen Adapter Ring for Zeiss Contessa f/2.8 and Ikonta 35 Cameras

A screw-on adapter ring is now available to fit these two cameras. It goes onto the outside of the lens mount, permitting use of the Series V filters with the Tiffen 5-D lens shade.

Price: adapter ring, \$1.40; lens shade, \$1.75; filters, \$1.70.  
TIFFEN MFG. CORP.  
71 BECKMAN ST., NEW YORK 7, N. Y.

## Astro 400mm Telephoto Leica Lens

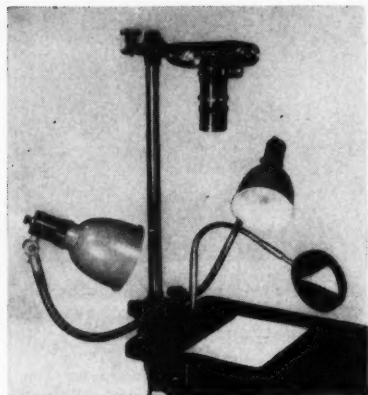
*Ed. note: This item appeared in the January issue, but the illustration accidentally got into the description of the Alsetar f/3.5 lens for the Alpa camera. This time, cut and copy match.*

This f/5 Fernbildlinse (far distant picture lens) is now available for all Leica cameras. Formerly made only for Kine Exakta cameras, it incorporates a reflex focusing Identoscope. The mirror action is coupled to the release button of the Leica and it can be used with or without a cable release.



The viewfinder is in direct line with the axis of the lens and magnification of 2X or 5X is available. The 2X eyepiece shows an erect image. The lens is made in Germany by Astro-Berlin and is priced at \$329.50 with either 2X or 5X eyepiece.

STERLING-HOWARD CORP.  
561 E. TREMONT AVE., NEW YORK 57, N. Y.  
(Continued on next page)



**Alpa Macrostat Utility Stand**

The Macrostat is a utility copy and close up photography stand, designed for use either indoors or out. It is easily assembled, has a table fixture, a two-piece pillar 33 inches high, camera clamp with arm, two reflectors and a double sided mirror on flexible arms. For field work, there are also two ground spikes, one large and one small. Weight, complete, is less than 8 lbs. The Macrostat can be carried in a large briefcase. Price, \$82.50, plus tax. HEITZ & LIGHTBURN 16 WEST 90 ST., NEW YORK 24, N.Y.

**Polaroid Close-up, Filter Kits**

Three close-up lenses and a carrying case with a built-in steel measuring tape make up the close-up kit. The three lenses (plus 1, plus 2, and plus 3 diopters), are each mounted in a light-weight mount which clips over the lens of the Polaroid, or any other camera having a 30-32mm diameter lens mount. Alone or in combination, they permit pictures of subjects from six to 30 inches from the camera. The Data Tape carries lens settings, etc. Price, \$8.95, plus tax.



The filter kit includes a yellow filter for cloud effects, a polarizing filter, and a "half step" filter designed specially for getting precise exposures midway between shutter numbers on the Land camera. Each permanent filter ring carries instructions for use and changes in lens and shutter settings. Price, three filters in leather case, \$5.95 plus tax. POLAROID CORP., CAMBRIDGE 39, MASS.

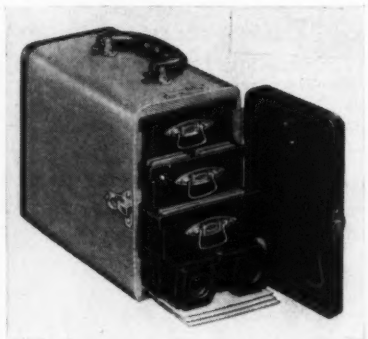
**Colorart Postcards in Quantities**

Colorart cards are color reproductions from transparencies. They are now being made available to photographers at a discount to sell to small businesses, resorts, etc. The minimum order is for 3,000; price, \$95, less the photographer's discount. For other prices, discounts, and information write to: COLORART, INC. 307 CROCKER ST., LOS ANGELES 13, CALIF.

**Four BAJA Slide Files**

Model SV-3N (illustrated) is a compact portable case with three indexed molded Bakelite drawers, each accommodating 50 to 75 stereo glass slides, and a felt lined compartment for viewer and three extra battery cells. An additional filing drawer can go in this compartment instead, if desired. Two tone luggage type covering. Price, \$11.25.

Model SV-4 is similar but has four Bakelite drawers to hold 200 to 300 stereo slides. Bottom drawer can be removed to make a viewer compartment. Price, \$13.



Model CR-8 is a library type storage cabinet containing eight drawers interchangeable with the files listed above. Additional cabinets may be nested on one another. CR-8 takes 400 to 600 slides. Price, \$23.

Model 3144 holds 50 of the 3 1/4 x 4 slides. It's made of leatherette covered plywood, blue or brown, with metal carrying handle. Sturdy fibre dividers are set in molded Bakelite filing units. Price, \$5.60.

BARNETT & JAFFE 633 ARCH ST., PHILADELPHIA 6, PA.

**Watameter II Pocket Rangefinder**

Outstanding feature of this accessory is that the user does not have to remove his eye from the sighting window to read the distance scale. The distance readings, in feet, appear in the form of a microscale in an illuminated frame to the left of the superimposed image of the subject. The Watameter is conventional in shape and has the standard accessory shoe for attachment to the camera. Price, \$9.50, tax included.

ALFA PHOTO CORP. 303 WEST 42 ST., NEW YORK 18, N. Y.



**Taylor Stereo Table Viewer**

This novel device provides a self-contained method of projecting and viewing stereo slides for groups. A single 150 watt lamp is the light source for two matched f/2.8, three-element projection lenses with built-in polarizing filters. The image is projected from the rear onto a translucent screen measuring 7 x 7 1/2 in., for daylight viewing by several people wearing Polaroid glasses.

Focusing, vertical and horizontal alignment, and tilt controls are provided. The slide carrier takes all standard stereo slide mounts. The unit comes in a cabinet with airplane luggage finish, weighs 11 pounds, and has a 10 foot heavy duty line cord with feed through switch. Price, \$65.

TAYLOR INDUSTRIES 257 WEST 39 ST., NEW YORK, N.Y.

**GoldE Auto-Focusing Slide Carrier**

The bother of shifting focus when mixing glass-mounted slides and readymounts is eliminated in a new Two Way Auto-Focusing slide carrier announced by GoldE. Each slide is centered automatically in the focal plane as it is inserted in the carrier. To be supplied as standard equipment on the 300-watt Manumatic projector, it does not displace the Manumatic carrier which will continue to be available as an accessory. For price and other information, write to: GOLDE MANUFACTURING CO. 1220 W. MADISON ST., CHICAGO, ILL.



**Ansco Color Film Bulk Loads**

For the first time, Ansco Color 35mm film is now available in bulk loads of five 20 exposure lengths of film notched and numbered. List price is \$7.46, which is \$3.50 less than the price of the same number of exposures in individual magazines. ANSCO, BINGHAMTON, N. Y.



**.7**-inch T2.7 (f/2.5) B&H Super Comat. Standard C mount for 16mm cameras. Click stops. Filmocoted. **\$8995**



## Announcing—newest member in the famous Bell & Howell family of fine lenses!

Newest addition to the new family of movie lenses is the very fast 1-inch f/1.4 Taylor Hobson Cooke Ivotal. It gives from 125% to 650% greater resolution (sharpness) at the corners of the pictures than any other comparable lenses yet costs less.

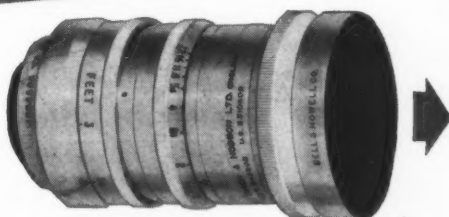
With the addition of this ultra-fast 1-inch lens, Bell & Howell brings you the fifth in its series of seven outstanding lenses. Each lens covers exactly twice the area of the next longer lens. Each insures greater accuracy—finer, more professional results. You'll cheer them as the greatest advance in camera optics in years.

See all 5 at your dealer's today!

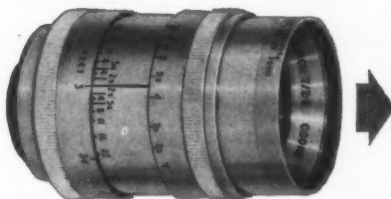


**1**-inch f/1.4 Taylor Hobson Cooke Ivotal in focusing mount. Unusual resolving power for sharpest definition. Finest color correction. Click stops. Depth of field scale in distinguishing red. **\$17995**

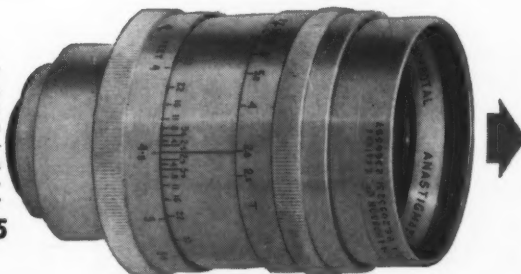
**2**-inch T 1.6 (f/1.4) Taylor Hobson Cooke Ivotal. Standard C mount for 16mm cameras. Click stops. Filmocoted. (Also available for B&H snap-on mount 8mm cameras) **\$17995**



**2.8**-inch T 2.5 (f/2.3) Taylor Hobson Cooke Panchrotal. Standard C mount for 16mm cameras. Extra legible depth of field scale. Click stops. Filmocoted. **\$18250**



**4**-inch T 2.5 (f/2.3) Taylor Hobson Cooke Panchrotal. Standard C mount for 16mm cameras. Extra legible depth of field scale. Click stops. Filmocoted. Nearly 50% faster than the fastest of any other leading 4-inch lens—400% faster than the slowest. **\$20995**



**Only Bell & Howell lenses give you these three advantages:**

**1** Highest degree of correction yet developed for 16mm film. Same sharpness and contrast for all lenses, regardless of focal length.

**2** Uniform-step magnification—just like the lenses Hollywood studios use.

**3** Widest range from which to choose. Complete family will include seven superb lenses.

You buy for life when you buy **Bell & Howell**  
Chicago 45

# the last word

letters from  
our readers

## World's Most Expensive Tripod

Sirs:

Your recent article on improvised tripods reminded me of a snapshot I made at a local beach when photographer Andre de Dienes happened to be there. A young shutterbug, anxious to photograph model Ree Coyle with whom Dienes was chatting, not only gained the photographer's permission—but then actually used Dienes' head as his tripod!

Allenhurst, N. J.

Alex Lisch



## Vox Populi

Sirs:

When I first heard of the editorial change on MODERN I anticipated a further improvement in an already good magazine. Instead, I found that the theme of your December issue was "There's No Photographer Like The Magazine Photographer." Henle, for instance, has done good stuff, but you didn't print it. The pictures you picked were calendar and travel posters. As for "Photographing Your Christmas Morning"—what possible function can an article of that type have in MODERN?

The highest point in photography is not a sale to *Life*. Instead of trying to make out that it is, why not continue the vital type of material you formerly published, i.e., "Ecuador Indians" by Collier, "Two Paris Photographers" by Charles Rado, or Paul Himmel's creative work which surely goes beyond the coverage you recently gave him? This is fresh material—a long way removed from the "Cat In Your Camera" thing that has been done over and over.

Newton Center, Mass. Jules Aaron

Sirs:

Your article on "What Makes A Life Photographer" answers every question a reader could ask: How a top-notch photographer got his start, his training, his technique, his photographic philosophy. Let us have more biographies of this sort; I would especially like to see one on Ivan Dmitri.

Buffalo, N. Y. Edward Gray

Sirs:

As a reader of *Minicam* and MODERN for years, I like the changes in the

December issue. I would like to see more articles on *Life* photographer Dmitri Kessel. I would also enjoy reading about Ralph Crane and Fritz Henle—or any talented photographers of their calibre.

Okla. City, Okla.

Jimmy Kyle

• You must have a crystal ball, Jimmy. An article on Ralph Crane will appear in the March issue; an article on Fritz Henle's Rolleiflex work is already underway.—Ed.

## Memorable Day

Sirs:

This is my memorable day for today I have received six letters from America from photographers who read my name in your list of Japanese friends. I am indeed glad for this correspondence will expand my view to the world, which I think if all photographers would do could help hold "Peace" to all of us wearied from wars.

Tokyo, Japan

Dr. Iso Yoshima

## Bikini Scarves

Sirs:

I especially like articles such as Peter Gowland's "Bikini Suits" (July 1950) which give readers a chance to combine other hobbies with photography. Following his instructions for making Bikini costumes, I found that these scarf costumes were easily constructed and much more attractive



than regular bathing suits. This self-portrait was made with a timer attachment. I used an Argoflex camera and Plus X film for a 1/25 second exposure at f/4.5. The main light was a #2 photoflood; a #1 photoflood served as the fill light.

Ithaca, N. Y.

Mary Suominen

## Wrong Date

Sirs:

I note in your article on Dmitri Kessel that he was supposed to be in Czechoslovakia in 1938 to cover Pres. Masaryk's funeral. I consider this remarkable in view of the fact that the president died Sept. 14, 1937.

Forest Hills, N. J.

Jerry Olney

• Thank you; we stand corrected.—Ed.

## Van Loon Revised

Sirs:

I can only say "bah" to the childish photographs in your magazine purporting to show bullets emerging from guns.

As every one in democratic USSR knows, guns were invented in 700 B.C.



by that great Russian inventor Ivan Ivanovich as a means of exterminating uncooperative minorities in a humane and inexpensive manner. From the time photography was invented by that great Russian inventor Josephich Stalinich, my family has been noted for photographic art. Olaf Olafsky, my grandfather, first invented electricity, then electronic speedlight, in 1880. My own greatest contribution to science is shown in the accompanying photograph in which you see the gun aimed directly at the camera and the bullet stopped dead in flight only a few inches from the lens. Does all this not put to shame your war-mongering experimentalists?

Norfolk, Virginia

L. Klinefelter

• Yes.—Ed.

## Going or Coming?

Sirs:

The work of several of the photographers who made prints from Elizabeth Timberman's 35mm negative for "Is there one best print?" (Dec. issue), differs in one respect. Photographers Bernstein and Timberman give the impression that miner Mike Kovac was coming from work, while Hibbs' and Greenberg's concentration on the face and hand suggest that he was going to work. Which was it?

Grove City, Pa.

P. J. Wortz

• Miss Timberman says that Kovac was on his way to work when the picture was made.—Ed.

Remember MODERN's new address! It's 251 Fourth Ave., New York 10, N. Y.

# Color

Makes  
All the  
Difference  
in the  
World



Beautiful  
RHONDA FLEMING  
star of  
THE REDHEAD  
AND THE COWBOY  
A PARAMOUNT PICTURE

## *add color to your favorite black-and-white prints*

Screenland beauties know by time-tested experience that color is the key to striking beauty.

It's so simple! No special skill is needed! No brushes. No messy colors to mix. You cannot ruin your favorite photo. It's always easy to remove your colors and make the changes which you feel will add that professional touch to your portrait. Best of all, with Marshall's Photo-Oil Colors your cost is but a tiny fraction of what it would be in ANY OTHER COLOR PROCESS. Order your enlargements in MATTE finish and you're all set for the color thrill of a lifetime—real family album treasure.

HERE'S A TIP from smart professional photographers. Take advantage of the faster shutter speeds obtainable in black-and-white and get sharp, clear prints. Then *add* Marshall's Photo-Oil Colors. You'll get the right, glowing, life-like colors of nature *exactly where you want them*.

Send 15c for the 32-page illustrated book "How to Make Beautiful Color Prints with Marshall's Photo-Oil Colors."

Ask for the new Free Marshall Rainbow Color Chart at your dealer.

*The most popular color process of all!*

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John G. Marshall Mfg. Co., Inc., Dept. C1, 167 North 9th Street, Brooklyn 11, N.Y.  
Canadian Dist.: Canada Photo Products, Ltd., 137 Wellington Street West, Toronto 1



MARSHALL MASTER SET



# Tana Hoban

## on child photography



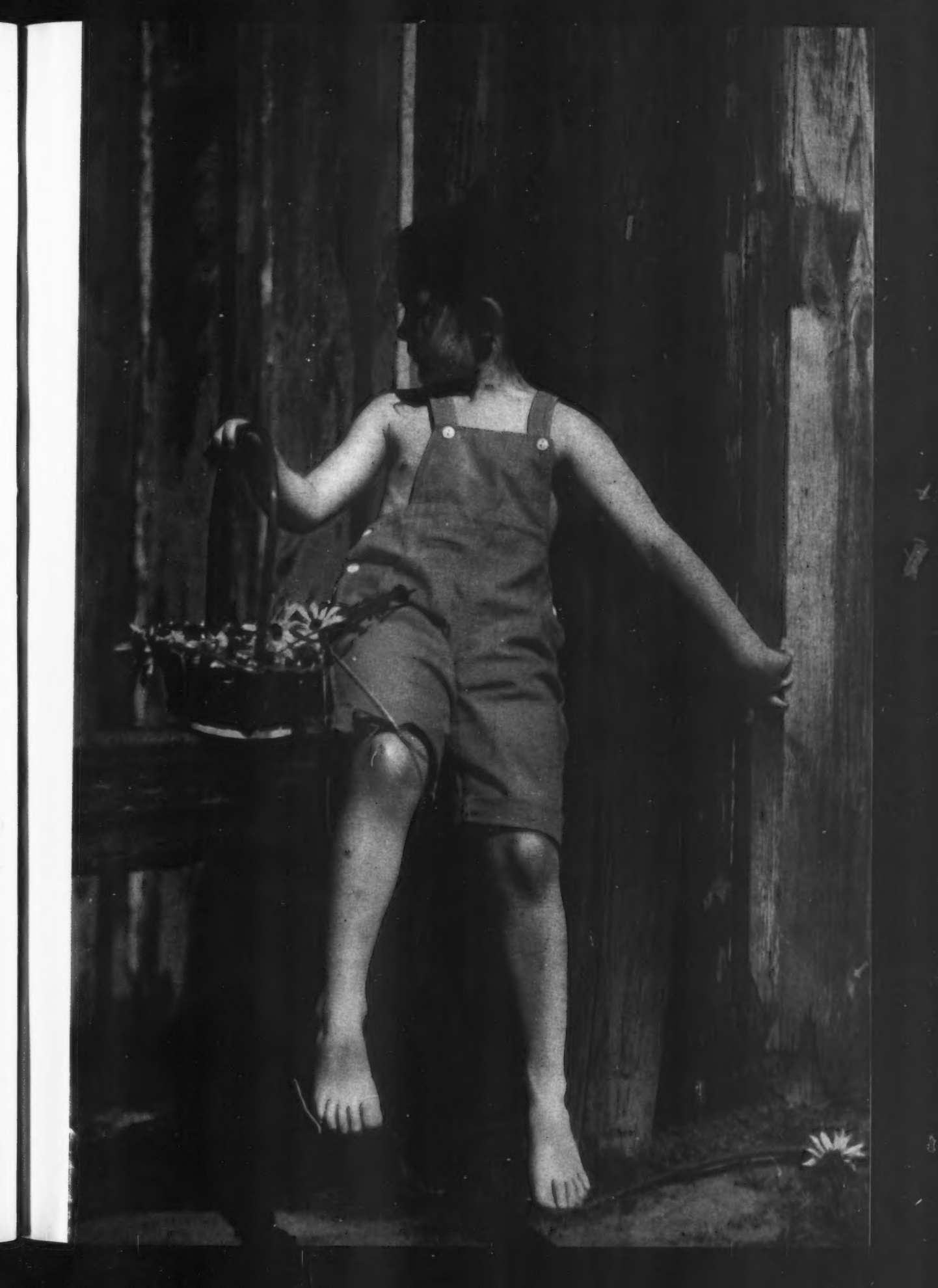
**M**y concept of child photography consists of capturing a moment in a child's life rather than photographing a posed wooden image.

A loss of exact focus here and there, an obscure detail—these are small considerations indeed when the results give an image of childhood. And we can sacrifice the “pretty” child, too, while we're at it. Every child is attractive to me, even beautiful in a spiritual sort of way, but not all of them come up to the popular standards of prettiness usually insisted upon in the advertising field. In my work I use children who seem to me best suited to convey the idea of the picture, whose faces best reflect the mood I am seeking to establish. I am not particularly fond of the typical well-coiffed professional-looking child model.

The photographic problem can be broken down into three questions: Where? With what? How?

Where? I make the majority of my pictures in my studio. It's a matter of preference. You may decide to do the majority outdoors. *(Continued on page 37)*

*At left:* I wanted to produce a feeling of space in relation to the child's expression, so I shot against a plain background in the studio using 3¼ x 4¼ Graflex with 152 mm f/4.5 Ektar lens. Exposure: Open strobe at f/16 on Super Panchro Press B film. *At right:* It was a gray day so I reflected as much light as I could into the model's face with a reflector. I used a 4 x 5 Graflex with an f/4.5 Cooke Aviar lens. Exposure: 1/25 sec at f/5.6 on Kodachrome.





*Left top:* The afternoon was drawing to a close. The child stood before a large bush which threw a deep shadow for a background. A breeze tousled her hair. I reflected light into her face with a tinfoil reflector. Kodachrome,  $3\frac{1}{4} \times 4\frac{1}{4}$  Graflex, Cooke f/2.5 lens. Exposure: 1/50 sec at f/6.3. *Left below:* The day was sunny but not too bright. The two youngsters, boy and puppy, sat playing. Again a reflector, Kodachrome, and the  $3\frac{1}{4} \times 4\frac{1}{4}$  Graflex were used. Exposure: 1/50 at f/4.5. *Below:* I was pretty close to the ground with my Kodachrome-loaded 5 x 7 Graflex for this one. The day was grayish and, as usual, I used a reflector. The lens used was a Cooke Aviar f/4.5. Exposure: 1/25 at f/5.6.





### **Equipment unimportant**

With what? Any camera will do. I have no surprises up my sleeve. I have two Graflexes—one a 5 x 7 and another a 3½ x 4¼—and a Kodak Reflex. I use no special lenses. My studio is equipped with Saltzman floodlights and a Ray Albert speed-light unit which I use for both color and black and white. However, the simplest camera and lighting will do. I don't consider the quality of a photographer's equipment to be of prime importance. I have used a box camera to good advantage.

As for developers, I am partial to Microdol for films and Dektol for paper. I use Illustrator's Special E paper for enlarging.

How? Well, "how" is going to occupy the rest of this article.

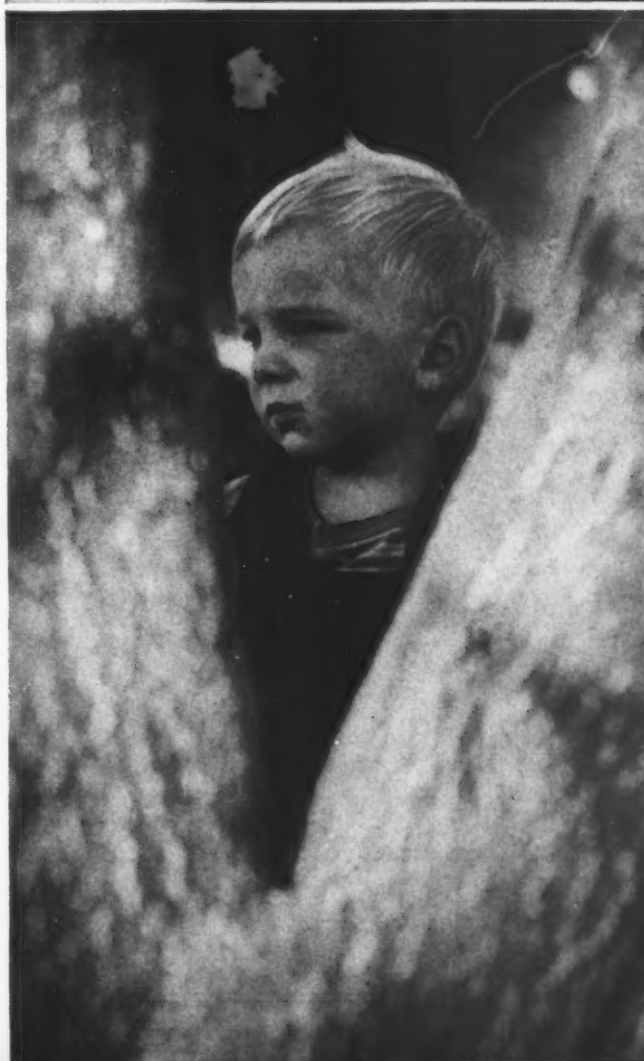
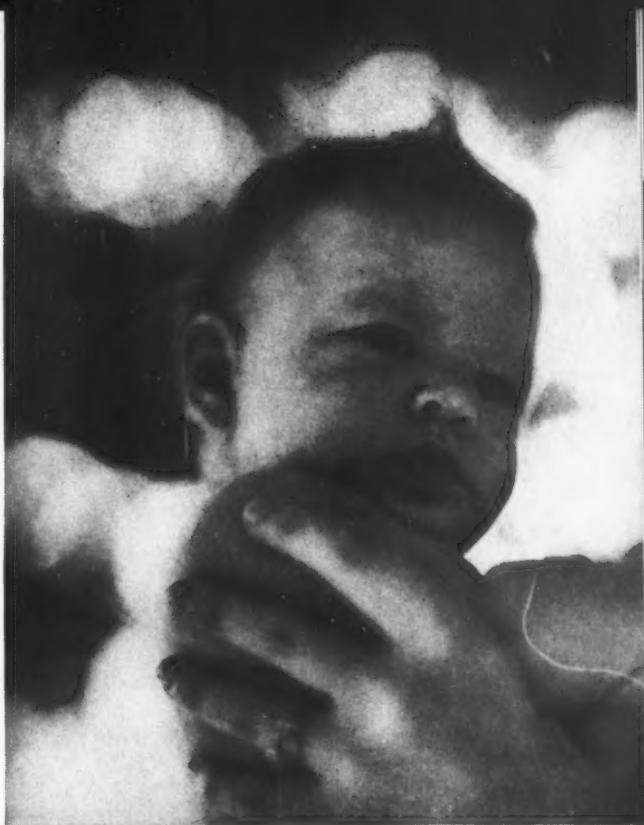
Since I prefer to take my pictures indoors, let's discuss the indoor set-up first. In my studio, I have a neutral, almost characterless background which must be used with care so that the child isolated against the backdrop does not look artificial. More than ever he must not be permitted to become stiff or pose-conscious against the backdrop.

### **Props: what and where**

The studio shot does not need to be completely barren of props. Certain ideas will require a few props to fully convey the meaning, but the child should always be the center of interest. I try to avoid cluttering up the picture. A little table with a birthday cake on it, a plain white wall with the play of sunlight upon it, a doll or toy to hold—these are the kind of simple, yet suggestive, props which can be used without distracting the attention from the child. If the child is imaginative, a single prop will sometimes lead to an inspired moment which otherwise might not emerge. On the other hand, an elaborate studio setting, a clutter of props, frequently leaves the child's imagination untouched.

Moving inside, into the child's home, introduces a note of intimacy not possible elsewhere. The child surrounded by a familiar and well-loved environment behaves spontaneously and freely. Again, I try to keep my lighting arrangements as simple as possible, preferring the effects obtained through the use of natural light. This is not to say that I dislike artificial lighting; it's sometimes indispensable. But natural lighting produces effects not obtainable any other way. On occasions I have utilized the pale daylight of an overcast afternoon. The diffused and shadowless lighting of a "grey day" has provided me with many satisfying pictures. Not only does this lighting produce a soft effect, but it also allows the

**Top right:** It was a beautiful summery day. The subjects were in the deep shade of a tree. I opened the lens of my 3½ x 4¼ Graflex to the maximum aperture of f/2.5 to throw the background out of focus. Exposure: 1/50 on Defender 428 film. **Bottom right:** I like the feeling of design given by the V-shaped tree trunk. Exposure: 1/50 at f/3.5 on Super XX film using a Kodak Reflex II.





Afternoon sunlight streamed through the window and was reflected back to the subject with a tin foil reflector. Exposure: 1/100 at f/2.5 on Super Panchro Press film using the 3¼ x 4¼ Graflex.



The child didn't realize I was shooting. Tin foil reflected the hazy sun. Exposure: 1/50 at f/5.6 on Super XX with the Kodak Reflex.

child to move at random. I do not have the problem of trying to keep the child in or near the sunlight. Portable speed-lighting is really quite good for all-around purposes. The children get used to speed-lighting very quickly and soon ignore it altogether. They romp and play while the speed-lighting periodically erupts in a bright flare of light. For the more thoughtful pictures—the ones of introspective little boys or daydreaming little girls—I prefer to use reflected light or work with natural light. For pictures of this sort I often look for windows and doorways as settings.

The child falls beautifully into the spirit of the surrounding when he finds himself out of doors. It's always something of a lark to go traipsing off to the country, or down to the seashore, or on any kind of a junket away from home. In a holiday mood the child is capable of the most charming flights of fancy, and when children play together in a group, no direction is necessary.

Shooting outdoors, the weather of course has to be taken into consideration. There are many "in-and-out" days when one has to (Continued on page 92)



It was late afternoon on a very grey day. The 3¼ x 4¼ Graflex was loaded with Super Panchro Press B. My exposure was 1/100 sec. at f/2.5.





Most newspaper pictures are "made", not found. For this, Stahl saw policeman directing traffic in storm, borrowed puppy, asked policeman to put it inside slicker. After pic was printed, A.S.P.C.A. tried to reward cop with medal. He, of course, told truth, refused decoration with thanks.



Exception to above rule: Spot news shot of boy crying over dog killed by hit-run driver was caught by Stahl on his way home from work. Pic demonstrates importance of having camera ready for action at all times. Stahl carries his set for taking, f/8 at 1/200 second, in back of his auto.

# *hurry up!* ...and wait

**theme of the news photographer's life—in this case, Bill Stahl of the New York Mirror**

**by JACQUELYN JUDGE**

**W**HAT'S a news photographer's working day like? Does he dash around—press card stuck in hat band, scooping his colleagues? Did he meet President Truman yesterday? Joe DiMaggio this morning? And will tomorrow's camera subject be Elizabeth Taylor? Does he solve murders with his camera à la radio's "Crime Photographer?"

If you see enough movies, read enough two-bit mystery thrillers, own a radio or television set—this *could* be your picture of the typical metropolitan news photographer's life. But if you'd have a talk with Bill Stahl, staff photographer of the *New York Mirror*, your picture would change radically.

You'd discover that he goes to work at a specific hour each day for a specific number of hours just like an office worker. That he goes out in any and all weather just like the mailman. That most of his work is pure routine like the truckdriver's. And his contact with the celebrities he photographs is about as personal as that of the cab driver who pilots Lana Turner from the LaSalle Street Station to Union Station in Chicago.

Further, if he tried to scoop a fellow photographer when they were on a story together, he'd find himself on the outside looking in as far as his job is concerned. Reason: news photographers are interdependent. They wouldn't be able to handle their jobs without the help of their fellows. They realize this and they stick together clannishly.

## ***We hang together . . .***

Example: if Stahl and a group of photographers are standing in a hallway outside a courtroom and a judge comes along and tells him that the prisoner will be taken out through a specific door, Stahl is honor bound to share this information. The judge is not *telling him* personally. He is *telling a photographer*. And the news photographer's ethics dictate that the photographer must pass on such



Quick thinking on Stahl's part resulted in exclusive picture of enraged cops and cowering cop-killers. Prisoners had been captured following escape from Sing Sing. Photographer climbed through window of Ossining police station, saw this.

information. (However, if the same judge drops dead in front of Stahl, Bill can take the picture and make a scoop. In this case, the event occurs in front of him—and it's his story.)

#### ***Or hang separately***

If a photographer is marked "no good" by his colleagues, he isn't fired by his boss. He just finds it a little difficult to conduct his business. A clear silence may fall over a group as he approaches. He may discover that no one will give him the caption information he so desperately needs. It may happen that he'll miss a news story completely and find himself explaining why every paper in town but his own has a picture of the latest axe-slayer on the front page.

But before you make harsh judgments on these boys, remember this: they are only protecting their own bread and butter. And they are willing to help each other out. If Joe Smith is ten minutes late to take a picture at City Hall, one of the other boys will take one for him and give him the holder and film. Some day the favor will be returned. But if Joe Smith's paper just hasn't bothered to send Joe on the assignment and a reporter



Few minutes after the above shot, the other photographers came into the room. Police obligingly lined up to pose with the escaped convicts. Stahl noticed one especially angered policeman glaring at the captives. He waited for the other photographers to flash. They did. Then he took this shot.



**Hazards of photographing the celebrated:** When J. P. Morgan was brought home ill on a train, newsmen got permission for pictures. Even so, bodyguards intervened. Stahl took this anyhow, ended up flat on his back on ground.



**Hot weather pic:** Standby of the news photog is the weather pic. Reason: They're always good for a feature spot. Boy was sitting just like this when Stahl drove down Lower East Side street. Street gamins like this one aren't camera shy.



**Spot news is tragedy more often than not.** A Puerto Rican family in Spanish Harlem has just learned that a son of the family was murdered. A second son said: "No pictures." Stahl got okay by saying pics might help press prosecution.

asks another paper's man to take a picture for him, he'll probably meet with a prompt refusal. News photographers are clannish—and exclusive with their favors.

### ***Begin at the beginning***

Bill Stahl became a member of the clan by starting at the bottom. He went to St. Francis Xavier High School in Manhattan. When he was there, he took a few pictures for the school yearbook with an Eastman folding camera. After he was graduated, he went to work as a photographer on the *Brooklyn Eagle*. He was handed a camera. Before you could say "Speed Graphic," he was out taking pictures of luncheon speakers, society matrons, and recently laid cornerstones.

A few years later, in 1932, he took a job with the *Mirror*. With one brief interruption (and more about that later), he has been there ever since.

Newspaper photographers have a cross to bear—their equipment case. Whether the photographer is slogging through water up to his waist covering a water main break, or photographing the top of the Empire State Building, he carries a 30-lb. case over his shoulder containing the necessary tools—the camera, film holders and midget flashbulbs.

The first thing the photographer will do on an assignment—if he has time—is to find a place to park the case. He then slips as many film holders and midget bulbs into his coat and pants pockets as they will hold, grabs his camera and is ready for anything. Anything, that is, except the remarks of the tailor who tears his hair trying to press flat the resulting baggy pants and shapeless coat pockets.

Stahl, like most of the 200-odd other news photographers in New York, uses a 4x5 Speed Graphic. His has an f/4.5, 5¼-inch Carl Zeiss lens. All of the *Mirror* photographers use the new Pacemaker model Speed Graphics. These are owned by the newspaper, but each man always uses the same camera—so that he will know its idiosyncrasies, if any.

### ***One lens, shutter setting***

Stahl's camera is always set at 1/200 sec. and f/8. All the photographs with this article were taken at that exposure and speed. The exception: the portrait of murderess Madeline Webb. The reason: Stahl knew she was coming through that particular courtyard and had time to allow for the less-than-good lighting conditions.

When using flash, Stahl generally uses it on the camera. The reasoning behind this is absolutely sound. Newspaper art departments don't like the shadow detail which results from using the (to them) fancy flash off-camera, or multiple flash techniques. The shadows muddy up anyhow in newspaper reproduction and produce unpleasant effects. It is better to be sure with flat lighting. In the photographs reproduced with this article there is but one exception to the rule. The picture of cartoonist Al Capp and his "Wolf Girl"—Lily St. Cyr—is made with flash off camera. (See Coffee Break with the Editors, page 8.) But this was part of a feature spread, so the frills were in order.

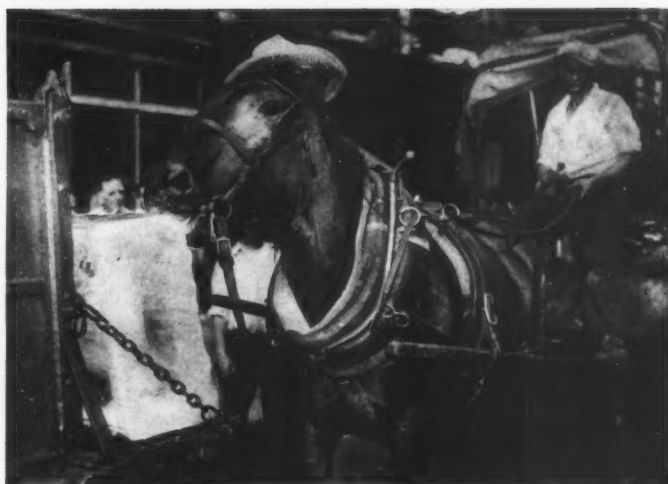
Besides, in a roomful of photographers, it is possible to get as many as six pictures in a minute working with flash on the camera. Holding an extension, moving around would cut down on (Continued on page 93)





Minutes before this shot, Madeline Webb had been told that she would escape the hangman's noose. Here, she rubs her neck coming out the courtroom door. Stahl, hidden in nearby room, had never seen her before, says sixth sense told him she was subject.

Another hot weather pic. Stahl bought cake of ice and hot, thirsty horse obliged by taking a few licks. Many times photographer has such an idea for months, has to wait for luck to come his way to get picture.





The author checks one of his cameras.

# beginners' mistakes

by Charles Phelps Cushing

**T**OO many amateurs are 'trigger-happy,' remarked the photo-finishing department clerk as he sorted the yellow envelopes just in from the laboratory.

"Just what do you mean by that?" I asked.

"Take this batch of snapshots," he replied. "Some of these envelopes contain work as good as that produced by a lot of professionals, but most of them don't. Know why?"

I bit, and asked.

"Amateurs don't take precautions. They're always in a hurry—never organized. Just for the heck of it, let's see how well organized you are—after you've finished taking photographs, is there something you always do before you close your camera case?"

"Sure; if I've used up all the pictures on the roll of film, I put in a new roll, and I always set the camera at 25 feet and the lens and shutter at  $f/11$  and  $1/100$  sec."

"Why?"

"Just in case—I might see some shot on the street I want to grab quickly. With fast pan film in my camera, the shutter set at  $1/100$ th, the lens at  $f/11$  and the distance at 25 feet, my depth of field tables tell me everything between 13 feet and nearly infinity will be in focus. The shutter speed of  $1/100$ th will stop most action. If I see something I want in a hurry, I can just open the camera, aim and shoot. With slower film, I cut the shutter speed down a bit and hope the action won't be too fast."

"Not bad—when did you (Continued on page 100)



If your lens is focused for close-up shot and you forget to reset it before moving back for a more distant photograph, you can expect this as a result.



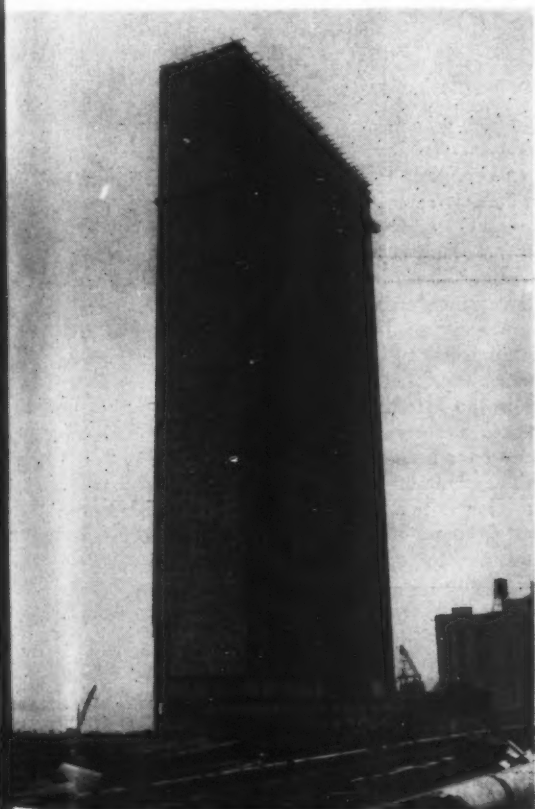
Sharp, clear pictures depend on accurate focusing. Before each shot, check focusing scale to make sure setting has not been knocked askew accidentally.



This photograph was taken by a photographer who was heard to remark, "I can hand-hold an exposure for a full second." Even if true, he couldn't stop the movement of automobiles with such exposure.



A tripod, cable release and cars not in motion produce an interesting study of a town's main street at night. A tripod never hurt any night shot, whether camera was a box or \$500 job with an  $f/1.5$  lens.

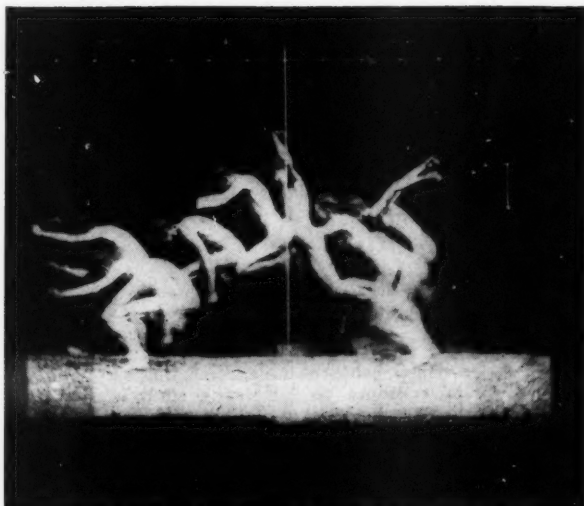


Photographs taken on a dull day will usually lack punch. Objects have little contrast. A gray, uninteresting sky adds to poor result.



Sunlight on a building creates highlights and shadows, thus improving contrast. Yellow filter darkens sky, brings out clouds.





Strobe shot? Nope. These images of boy jumping were taken on single plate in 1885 by Eakins.



In order to study body movement, Eakins photographed running jump as well as standing.

# Thomas Eakins

*Unknown Pioneer  
of Motion Photography*

by KURT S. SAFRANSKI

**F**AME came late to Thomas Eakins, the painter. In fact, it came too late—belated tributes, exhibitions, held many years after his death in 1916.

And fame has yet to come to Thomas Eakins, the photographer. Even today few Americans realize that their most important portrait painter since Copley was also one of their pioneer photographers.

For Eakins, along with Eadweard Muybridge and the French physiologist Jules-Etienne Marey, was involved in the first photographic studies of motion. These men were trying to go beyond the comprehension of the human eye. They were trying to answer the fascinating problems: How does a horse gallop? How does a man walk? Skip? Jump? What is there in these movements which the imperfect mechanism of the eye misses—and the magic of the camera captures?

Today's sophisticated picture readers accept as a matter of course the study of a leaping cat by Gjon Mili (see page 53). They know by this same photographer's tracer light pictures in *Life* how Picasso paints. A ballet dancer's *entrechat* is faithfully recorded, a horse's leap arrested.

But a century ago man did not really know how

Eakins all his life strove for honesty in painting people. It isn't surprising therefore that his photographic studies of people, such as this one, show this honesty as well as an acute sense of design and texture.





Like many modern painters, Eakins often used photographs as guides to his paintings. This study was used in painting below.



The complete naturalness of the standing figure in this Eakins painting stems from painter's pilot photo above.

he walked. And a bet was made by a millionaire California governor as to whether or not a horse lifted all four hooves off the ground in a gallop.

Into this intellectual boiling pot came a man who was neither photographer nor physiologist. A mere painter—Thomas Eakins by name.

Eakins came to photography in the same way that he arrived at his style of painting. He possessed an incorruptible honesty. He painted people as he saw them. He did not stoop to conquer. There is no trite flattery in his pictures, not much grace of style or sweet charm, no sugar coating. Eakins combined artistic and intellectual powers of a high order. He had the scientist's gift of observing life from a detached standpoint and he always remained in an extraordinarily close contact with reality.

This realistic revolutionary in art who dared swim against the romantic stream of the nineteenth century had a great curiosity and a rare thoroughness in going down to the essentials of all problems that fascinated him. Paintings that left too much to imagination he called "cowardly." He desired to know objects not only as a surface but "from within"—his conception of them was three-dimensional. So he came early from painting to sculpture. And it was only logical that he felt the further need for a profound study of anatomy at the Jefferson Medical College under Pancoast and Gross. (He later painted Gross in his clinic.)

#### *Started with muscle studies*

In pursuit of his studies on motion and muscular actions he arrived at certain conclusions which he presented to the members of the Academy of Natural Sciences at Philadelphia in 1883 under the title: "Differential action of certain muscles passing more than one point."

Eakins contended—after careful research—that the then accepted theory that muscles were "flexors" and "extensors," which worked and rested alternately, did not correspond to reality. He found by keen observation a different principle and illustrated his theory by showing the front and back legs of a dissected horse from which all the muscles had been removed. With the modesty so typical of the man Eakins, he apologized at the beginning of his speech that he as a mere painter dared to offer to this scientific galaxy an explanation differing from the accepted one. But he carried his point well by a clever construction of wood and rubber bands imitating closely the movements of the leg.

This exacting sense of workmanship, this attention to details, and untiring effort to clear doubtful theories is an example of his approach to problems. (Continued on page 90)





An Eakins photograph of model during one of his art classes before "the nude model scandal" broke.



Whether painting or photographing, Eakins portrayed subjects as they were, no frills, no retouching to hide wrinkles. No matter what the medium, Eakins was a realist.



**Indigo locks flying, Madeline Rosay, prima ballerina of the Brazil Ballet, dances on the mosaic sidewalk of the Copacabana Beach. Earl Leaf used only the flat light from an overcast sky to make this Rolleiflex exposure of 1/500 sec. at f/3.5.**

beauty around  
the world:

# Brazil

photos by Earl Leaf

**W**HAT's a typical Brazilian beauty? Answer: There just ain't no such thing. Brazil is a typical New World country—filled with many races and nationalities. A quick glance at these four lovelies will spell “melting pot” in its nicest sense. The strains of Indian, Spanish, French, Negro—plus who-knows-what?—combine to rare perfection. . . . PHOTOGRAPHER Earl Leaf, who is responsible for these appealing pictures, is also responsible for many photographs from many countries which you may have seen in *Look*, *Life*, *Holiday*, *Harper's Bazaar*—and other publications. Mr. Leaf's photographic career began some fifteen years after he began his journalistic career as a newspaperman (ten years in the United States, five in China). He is the author-photographer of the exciting picture book *Isles of Rhythm*. . . . LEAF started professional photography quite by accident. Had a camera with him when he scooped the world in 1938 in a word and picture interview with the leaders of China's Red Army. Same people we read about today: Mao Tse-tung, Chu Teh, Chou En-lai. Did the job with a box camera and two rolls of film, which really proves that equipment is not the most important equipment for a photographer. . . . THIS world-journeying gadabout has now been graduated to a Rolleiflex, but he still eschews the complications of many extra cameras, equipment, lights. Whenever possible, as with these four pictures, it is the Rollei plus available light—or flash simulation thereof—that does the job. Mr. Leaf—the newspaperman in search of the story is still very much in search of the story—be the subjects Chinese Communists or Brazilian Beauties.—J. J.



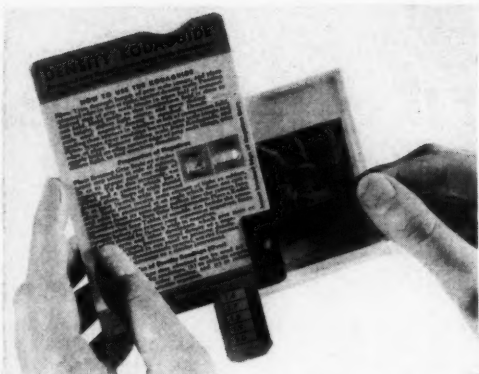
A Carioca girl (above) sings while she dances the Samba at Radio Nacional in Rio de Janeiro. In São Paulo, Carmen Souts (below) is typical of the teen-agers who attend Casa Roosevelt school. She speaks English.



Olive-skinned, sloe-eyed Noemia (below) is proud of the touch of Indian blood in her veins. Regarded as a Brazilian beauty, she is considered one of the country's best painters, is equally adept as a sculptress.







**1** Determining the density of a separation negative. Visual estimation is sufficiently accurate.

Gjon Mili made this shot of a leaping cat in 1942. Dye transfer print reproduced here faithfully retained dramatic contrast of brown and white fur against pure red background. Edgerton strobe lights provided the instantaneous illumination. Lens aperture:  $f/5.6$ . Film:  $2\frac{1}{4} \times 3\frac{1}{4}$  Daylight Kodachrome. Eastman Kodak Co. made the dye transfer shown here. ▷

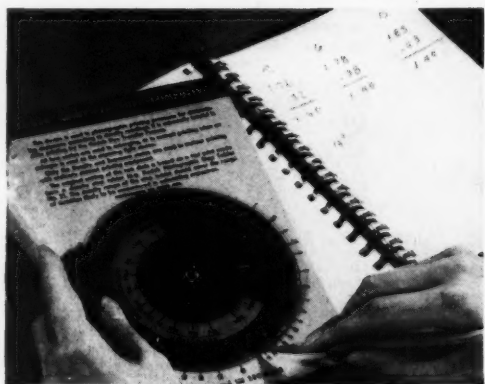
# dye transfer...

*The newest processing technique, step by step*

by HOWARD C. COLTON, *Rochester Institute of Technology*



**2** Examining trial cyan image on paper. This is simple contact printing.



**3** Computing exposure time for making matrices from green and blue separation negatives.

**M**ORE top-notch color prints are being turned out today by the Kodak Dye Transfer process than by any other method. Many of the color advertisements and illustrations you see in magazines were originally Dye Transfer color prints; similarly, most of the color prints that are exhibited in photographic salons are Dye Transfers. This wide acceptance among professional and amateur photographers alike testifies to both the color quality and the practicability of the process.

The Dye Transfer process is a direct descendant of a long line of color printing processes, each dependent upon the transferring of a dye from a gelatin-coated film (called the matrix) to a gelatin-coated paper. Such processes are often described as "imbibition processes" since the dyes that make up the final print are imbibed or soaked up by the gelatin coating of the paper.

Before the photographer can transfer a dye image from a matrix to paper, some means must be found to form the dye image in the matrix. This is generally accomplished by making a gelatin *relief* film which will absorb dye in varying amounts.

## *How a relief film is made*

The tonal values in our black-and-white prints are measured, as we know, by the variations in the amount and quality of the silver images they contain after development. The negative from which a bromide print is made determines, of course, both where and how much the different amounts of silver in an image will be affected during development. Thus we can say that in a black-and-white bromide print the image is composed of varying amounts of silver deposit (density). Further, it is these density (*Continued on page 55*)



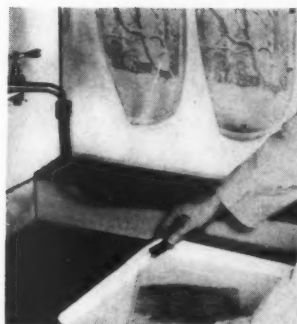
The Dye Transfer print shown here was reproduced from a 35mm color transparency. To obtain the three color separation negatives required in the dye transfer process, it was necessary to re-photograph the transparency three times, using a red filter for one negative, a green filter for the second, and a blue filter for the third. After a test matrix is made from the red separation negative (see text), three sheets of matrix film are exposed, one after the other, from the separation negatives. In the picture at the right, the matrix is being removed after transfer of the cyan image. The magenta dyed matrix will be transferred next. The yellow dyed matrix is transferred last.







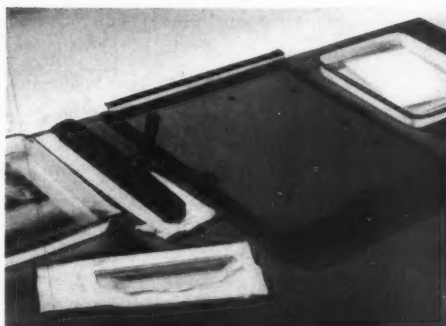
**4** Drawings on easel help position each negative properly.



**5** Matrices are washed to remove excess gelatin.



**6** Matrix images are aligned on an illuminator, trimmed.



**7** The printing equipment consists of trays, a transfer blanket (see text), blanket clamp, dyes, and a print roller. Tray at right holds solution in which paper is soaked; left hand tray contains matrix in acetic acid solution awaiting transfer. Note disks on the blanket used to align images ◁ on the transfer paper.



**8** First matrix being positioned on blanket with trimmed edges in contact with the three aligning disks. ▷



**9** Rolling back matrix after the dye image is transferred.



**10** After cyan and magenta, yellow image is last.

differences that actually form the picture which we see in the final print.

In a *relief film* the useful image is composed of varying *thicknesses* of gelatin; i.e., the light portions of a bromide print contain little or no silver, while the darker areas contain considerable silver and appear dense. In the relief film, the light portions have little or no gelatin on the support, while the darker areas of the subject have a relatively thick layer of gelatin on the support.

If a prepared gelatin relief image is placed in a solution of black dye, the dye will be absorbed by the gelatin—a lot of dye where there is a thick deposit of gelatin and less dye where the gelatin thickness decreases. If the gelatin side of such a dyed relief film (matrix) is placed in contact with a gelatin-coated paper, the dye can be persuaded to transfer to the paper and thus form a *dye image* in the paper. Such a print looks just like a black-and-white bromide print. This procedure might seem involved for making a single black-and-white print, but it becomes important when it is necessary to transfer several different dye images onto the same piece of paper—as is required in a three-color process. One of the biggest advantages of working through a relief process is the fact that many identical transfers can be made by simply re-dyeing the matrix relief film and transferring over and over again onto other sheets of paper.

#### **Advantage of the dye transfer process**

It is well known that three suitably colored components can be used together to reproduce all the colors of an original scene. When printing on paper, these three components are colored cyan, magenta, and yellow, and the transference of dye images from matrices dyed these colors to a single sheet of paper is what produces a final print in full color. While several other processes are available for making color prints, Dye Transfer offers these distinct advantages:

(1) The printing process (transfer of the (Continued on page 56)

## Matrix Contrast Control

Density range of negatives	Develop matrices to:	Developer ratio A:B	Exposure based on 1:2 developer
1.8	Very low contrast	1:1	130%
1.6	Low contrast	1:1½	115%
1.4	Normal contrast	1:2	100%
1.2	High contrast	1:4	85%
1.0	Very high contrast	1:6½	70%

## Steps in Matrix Production

Step	Time	Operation
1. Water presoak	2 min.	Wet matrices before development. Use Wratten 1A safelight.
2. Development	2 min.	Three matrices developed together. Agitation by interleaving. Use Wratten 1A safelight.
3. Rinse	½ min.	Water rinse before fixation. Use Wratten 1A safelight.
4. Fixer	2 min.	Room lights may be on after films have been in fixer for one minute.
5. Relief formation	3½ min. ea.	Each matrix treated separately in four baths of hot water at 120°F.
6. Cool water rinse	½ min. ea.	Rinse each matrix in 68°F water.
7. Dry		Hang matrices to dry.

## Transfer Controls

1. To decrease highlight density	—Add highlight reducer to first acid rinse.
2. To increase density	—Remake matrices with more exposure.
3. To decrease dye image contrast	—Add sodium acetate solution to first acid rinse.
4. To increase dye image contrast	—Use dye solutions prepared to high contrast (See Fig. 14).

dyes) can be repeated at will to give identical color prints with the only extra cost being that of additional sheets of transfer paper, and for the dyes used. (A single gallon of the three Kodak Dye Transfer dyes will produce about 175 prints (8x10) of a subject of average density.)

(2) The photographic quality of color prints properly prepared by the Dye Transfer process is very high and the color fidelity is excellent.

(3) The adaptability and controls available when printing with this process allows adjustments of contrast and density of any of the dye images at the printing stage. In other words, this control enables the operator to adjust the dye images to obtain exactly the desired effect.

(4) The materials and photographic operations required for color printing by the Dye Transfer process are familiar to most photographers who have done their own darkroom work. If the procedure is carried out properly, a good color reproduction is assured.

Some of the steps involved in the Dye Transfer process may be difficult the first time they are attempted, but familiarity with the techniques will prove them to be simple and straightforward. Let's see how it's done.

### The negatives to be used

A prerequisite for any color printing process is either a set of color separation negatives, or a color negative such as Kodacolor or Ektacolor. If a Kodacolor negative is available, it may be printed onto Kodak Pan Matrix film by means of a procedure described in a Kodak booklet available from your photo dealer. Regular color separation negatives are obtainable directly in the camera by three successive exposures using red, green and blue filters over the camera lens, or from a one-shot color camera which exposes the three negatives simultaneously. Color separation negatives are also obtainable from color transparencies by photographing the transparency three times, using red, green and blue filters. These techniques are well known and can be referred to in the instructions accompanying the Dye Transfer process and in the photographic literature.

A "balanced" set of separation negatives should be obtained before starting with Dye Transfer printing. Balanced negatives are those which reproduce a scale of grays showing equal densities on each negative. Some lack of balance can be compensated for in the printing process but the beginner should try to start with a correct set of negatives. The Dye Transfer process can be adapted to a wide variety of contrasts in the separation negatives, the controls available making it possible to print successfully from sets of negatives with density ranges (difference between maximum and minimum density in a negative) as low as 1.0 and as high as 1.8. Such adaptability is due to the contrast control that may be exercised when making the three relief films or matrices from the separation negatives. As shown by the contrast control table (page 96), by adjusting the ratio of the two developer components, soft or hard negatives may be (Continued on page 96)



1. Key light, 500 w. (3200° K.) flood, high.



2. Fill light is placed lower, farther away.



3. Two spots furnish the rim lighting.



4. An overhead spot lights the hair.

Photographer Jules Alexander  
shows how he made

## this month's cover...

**Y**OU'VE probably already noticed that Cindy Jewel, this month's cover girl, is a brunette while the girl in the pictures on this page is a decided blonde. Explanation: Cindy Jewel was on a world tour with Johnny Weismuller's Aquashow when photographer Jules Alexander shot the original cover transparency of her. Later, when we decided to show you the lighting set-up with black-and-white pictures, Cindy was no longer available. So Alexander asked blonde Barbara Nichols (this year's *Esquire* calendar cover girl) to act as stand-in.

The only props Alexander used in making the original cover transparency were a black background, a length of black velvet draped over a railing, and a piece of fish netting arranged diagonally over the velvet.

### How he lighted it

The lights consisted of three 500 watt Baby Keg spotlights and two 500 watt floodlights. Bulbs for the latter resemble ordinary #2 photofloods, but produce light of 3200° K. temperature instead of the 3400° K. light produced by regular photofloods. (GE bulbs of 3200° K. are especially designed for color work, and are available from most photo dealers in the 500 watt size for 70c each. Be sure to specify 3200° Kelvin bulbs. These have a screwbase which fits standard household sockets. Ed.)

For his key (main) light, Alexander used one of the 500 watt flood bulbs in an aluminum reflector. After raising the light to a height slightly above Barbara's head, he placed it about four feet in front of her and slightly to the left of the camera (Fig. 1).

On the opposite side of the camera, the second 500 watt light (also in an aluminum reflector) was aimed at the model from a (Continued on page 89)





CHARLES ROTKIN was in an airplane flying into a headwind when he made the exposure for this fine aerial photograph. Rotkin's camera, a self-designed job, sounds as if it's straight from Rube Goldberg: has a Keystone body, Kodak lens, Graflex shutter, Fairchild finder. Photo taken for Standard Oil (N.J.). Note how photographer carefully pointed up the smallness and loneliness of lighthouse by effective use of large surrounding black area of sea. If he had come in closer, story-telling point would have been lost.

# *where was the photographer?*

**O**vious answer to the above question: Behind his camera. But where the photographer was in relation to his subject is quite another matter—one which will provide you with intriguing picture-making ideas.

The snapshot is the infant step of the photographer. The ingredients: a subject (girl friend, relative, baby), a camera (usually simple, inexpensive, you can buy it at a drugstore), the photographer (that's you). The photographic process begins when you maneuver yourself here—and there—till the tiny image in the viewfinder pleases you.

As the infant photographer matures, you'll find yourself climbing ladders, standing on tables looking down, flat on your back looking up. You'll be looking for the new viewpoint, the new angle, the new place from which you see your subject best.

In these six pages, *Modern* shows you how other photographers have used the different point of view to excellent pictorial advantage. Try some of these ideas soon. And your audience will ask: "Where was the photographer?"

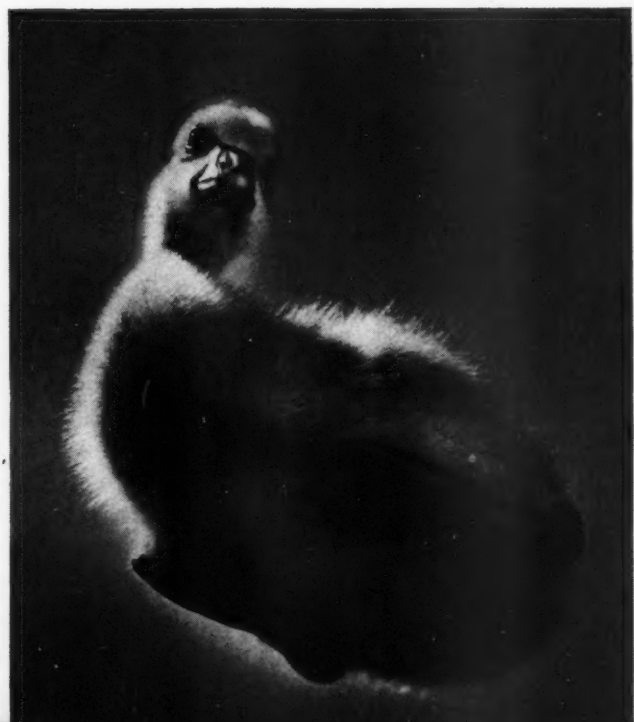
NORA DUMAS looked down from a Paris office window one summer afternoon and found this rooftop pastoral. What this goat was grazing on and why he was on a rooftop, we do not know. But the resulting pattern shot, with the contrast of white goat against shingles, is a pleasing composition. Taken with a Rolleiflex, f/11 at 1/100 sec.

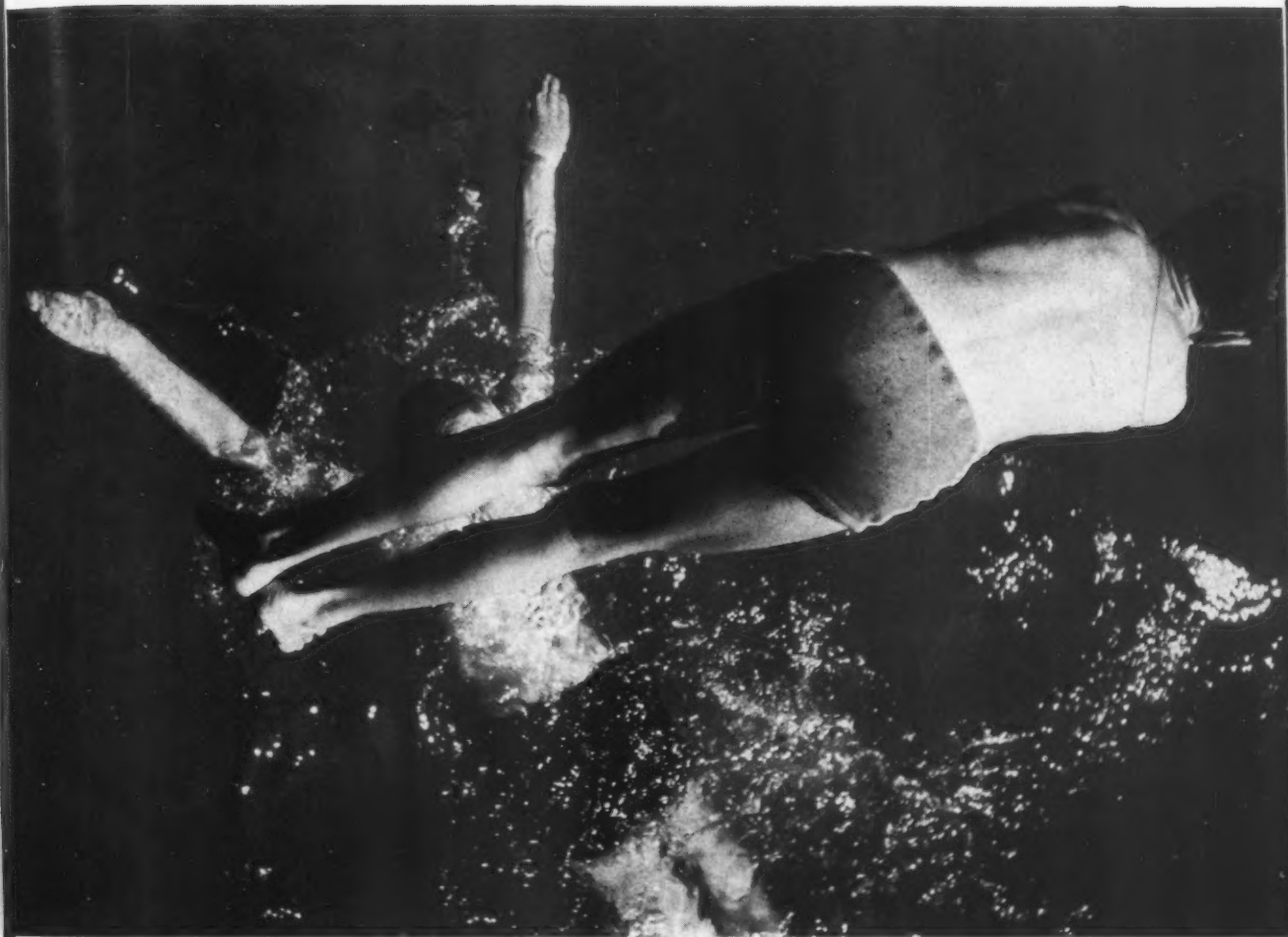


JUNGFRAU region of the Alps provides setting for this exciting picture of a mountain climber jumping over a crevice. Taken with a Plaubel Makina, Anticomar f/2.9 lens on Panatomic X Film-pack. Exposure was 1/200 second at f/9. Where was photographer E. A. Heiniger on this icy August morning? Your guess is as good as ours. Moral: Do not believe everything is as dangerous as the camera would first make it seem—but sometimes it may be!



QUIZZICAL gosling peers down through plate glass at photographer shooting from below. Joseph Foldes made this shot with a Rolleicord II, f/3.5 Triotar lens. Exposure: f/11 at 1/100 sec. Mid-afternoon sun provided illumination, aided by cardboard reflector set in front of subject. Caution: If you plan to try this yourself, make sure there are no reflections on glass top.

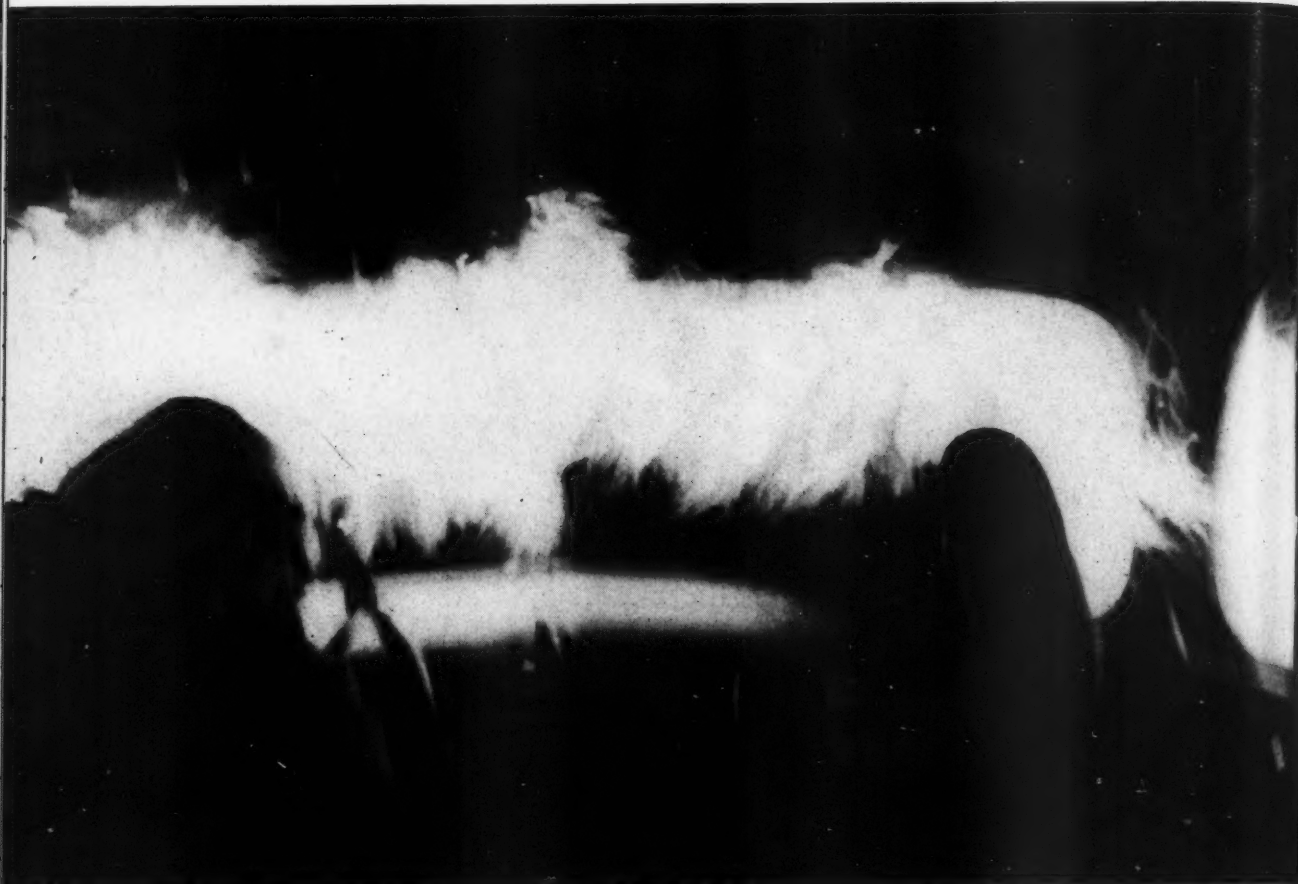




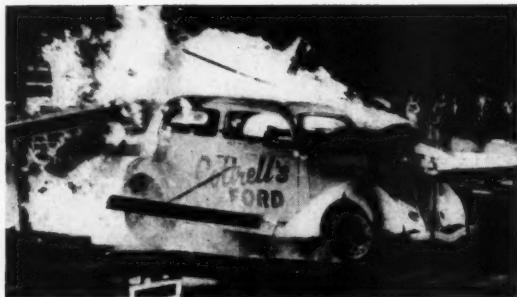
WHAT better place to photograph divers than from a diving board? Looking straight down on the action in the pool Siegfried Lauterwasser caught the beginning move in what may have been a happy summer accident. Camera: Contax with f/2, 5 cm Sonnar lens. Exposure: f/5.6 at 1/1250. Suggestion: make certain your balance is steady.

ARRANGE your friends in a wheel. Look down from a ladder and center your vision on the hub. Result: A picture such as this one by Ludwig Windstober. You can try to decide which spoke you like best later by turning the print in any direction. Do that with this one.





QUESTION: Where was photographer Paul Nodler when he took above picture? Answer: Take a look at picture below. He was sitting in the back of just such a stunt car as it piled through the flames. Picture above was taken with the natural light of flaming gasoline, Rolleiflex, f/5.6, 1/50 second. Should we add—hand-held? Demonstration picture below was taken with a 4x5 Speed Graphic, f/8 with strobes. Although the view is really “different,” we don’t recommend that you readers go to all this trouble!



LOOK UP! That is if you are photographing in a children’s playground, as was Marvin Goldman of Philadelphia when he took the picture to the right. These two little boys were playing on one of those exercise bars which is shaped like an inverted box. Goldman was almost directly underneath them. He was intrigued by the pattern they made against the sky and exposed and printed to whiten the sky. He used a Rolleiflex with an f/3.5 Zeiss Tessar lens and Super XX film. Exposure was made during the middle of the day, f/16 or f/22 at 1/100 second. No filter. Developer: D-76 for 17 minutes at 68. Goldman uses Varigam paper. Thus he is able to control his printing to a fine degree. Goldman does both realistic and experimental photography. This combines the abstract (in composition and printing) with the real (the happy smiling expressions on two small boys).



*pictures from our readers...*

# "I tried it myself"



"The Cat In Your Camera" (Dec. issue) gave Al Forman the idea for this picture. Using a 4 x 5 Linhof camera, Forman was able to stop the kitten's movements with a shutter speed of 1/200 sec. at f/22. A single flashbulb slightly above and to the left of the subject provided the only illumination.



Jack Mitchell of New Smyrna Beach, Florida, doesn't mind going after spontaneity of expression in his subjects the hard way. While draped precariously over the hood of a convertible being driven at 50 miles an hour, Mitchell made this picture with a Zeiss Ikon. 1/100 sec. at f/8; Verichrome.

**H**AVE you hesitated sending in your favorite picture because of uncertainty about the kind of subject matter we want, or the size of print you should submit? If so, let's put an end to that hesitation!

Any type of subject matter is welcome. All that is required is that you mention the specific article or picture in *MODERN* that inspired you to make your own picture.

Prints should be on glossy paper, untoned, and not smaller than 5 x 7, or larger than 11 x 14. The 8 x 10 size is most desirable. Each print should be accompanied by full technical data on how and why it was made.

Accepted prints will be paid for at our regular rates. Prints we do not have space for will be returned to their makers whenever a self-addressed, stamped envelope is provided. Address your prints to: "I Tried It Myself," *MODERN PHOTOGRAPHY*, 251 Fourth Ave., New York 10, N. Y.



An article on distortion (Nov. 1950) inspired reader Art Newton of Southport, N.C., to try an experiment with a chrome ferrotype tin and his 15 months old son. This bewildered expression was snapped at 1/100 sec., f/22, on Super XX film. A Press 25 flashbulb seven feet to the side furnished the illumination.

One way to retain the charm of reality so often lost in a prettied-up, formal portrait of a child, is to photograph the child candidly in a natural setting while he is absorbed in a natural problem. Dr. W. Jahoda of New Paltz, N. Y., made this picture with a Series D Graflex camera. Exposure: 1/10 sec. at f/11, pan press film.



"Winter Sports" (Jan. issue) reminded reader Murray Shepard of a picture he made last season on Black Mountain, New Hampshire. When skier Nancy Jones of Portland, Maryland, paused for a rest, Murray shot a side-lighted picture of her on Super XX film at 1/200 sec. With the snow acting as a brilliant reflector, he found that he had no need for a fill-light. A G filter over the Speed Graphic lens brought out the clouds, and a lens stop of f/16 provided plenty of foreground and background depth of field.





# After the bath is over...

## *How To Finish Your Prints . . . By Ward Pease*

**E**VERY picture is at its rich, sparkling best during the hour it swims in its final wash water. Once out, it has a long road to travel before becoming a finished print—and much of its beauty is apt to drop by the wayside. After years of experimenting, I've discovered a system of finishing prints which preserves much of their original beauty with a minimum of time and effort. Perhaps some of my methods may suggest shortcuts or aids to your present print finishing techniques.

### ***First, get them flat***

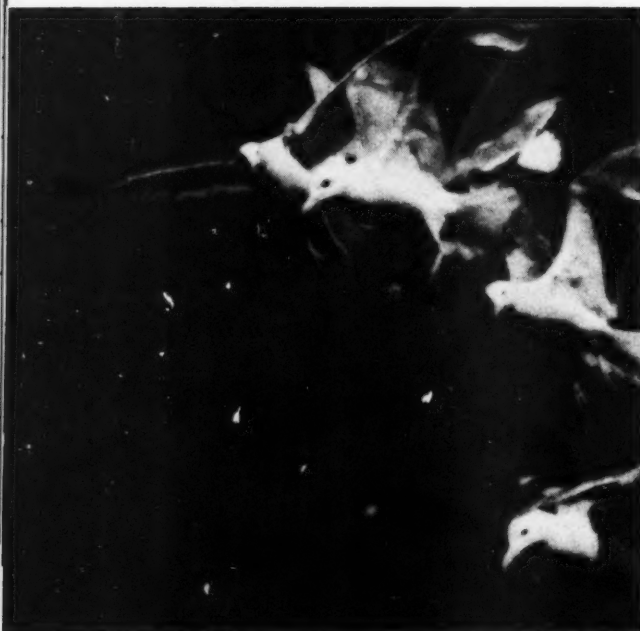
Let's start with the wet prints. Getting them dry is no problem, but getting them flat is. If you don't own an electric dryer, you can place the prints face down on blotters or put them in a blotter roll. To flatten the prints, once they are dry, place two or three clean white blotters atop one another on a table or other smooth surface. Place the curled print face down on the top blotter, and, while holding the print flat with one hand, moisten its entire back surface with a cellulose sponge or clean damp cloth. Cover the print with another blotter and place the

next curled print face down on this, repeating the dampening operation. Continue this procedure until all prints have been dampened and are between the blotters. Top off the pile with two or three more blotters, then place a large drawing board, breadboard or similar flat article on top. On this, pile a few heavy books. In an hour or two, your prints will be as flat as prints ever get. Keep them that way between cardboard in an envelope.

### ***Removing dark spots***

Now you have nice, flat prints, but on close inspection you inevitably will find small light and dark spots on the surface caused by dust specks in the enlarger or scratches and pinholes on the negative.

I find it easier to remove the dark spots first, since their removal often leaves white spots which can be handled at the same time as those already on the prints. Dark spots can be removed chemically or by etching with a sharp blade. Although I have tried two different chemical methods and have discarded both in favor of etching, I'll describe the former to you



Despite all enlarging precautions, a few blemishes are bound to appear on extreme blow-ups. A portion of such a one is shown here with dark and light spots.



After carefully removing the dark spots with a knife blade, and then "spotknocking" with a carbon pencil, the blemishes can barely be discerned even when close.

anyway, since many photographers still prefer them.

In one chemical method, the work must be done on the wet prints as soon as they come from the hypo—before they are washed. A small, fine pointed brush is first moistened with water and then touched to a crystal of potassium ferricyanide. The dark spot is then bleached out using the very tip of the brush. A word of warning—*don't moisten the brush with your mouth. Potassium ferricyanide is poisonous.*

The bleaching action is rapid and must be stopped at the proper moment by sopping the spot with a wad of cotton soaked in hypo or water. It's best to remove the spot with a series of applications and soppings so the action is always under complete control. This first chemical method is awkward, because the print is still impregnated with hypo and can stain objects on which it is placed.

The second chemical method is more convenient. Household bleach, such as Clorox, is applied to the dark spot with a steel pen. However, many applications are necessary to remove even a tiny spot. When the bleaching action has gone far enough, dry the spot with a blotter. The numerous applications are a drawback here. Another major disadvantage is that a white spot with a black dot in the middle appears if the bleach spreads or is left on too long.

### Skiving spots

I find that etching or "skiving," as it is sometimes called, has decided advantages. The equipment and set-up are simple.

You can use a razor blade, an etching knife bought at a photographic supply store, or the small blade of a good quality steel pocket knife which has been sharpened to a keen edge with an oil stone. I prefer the latter, since the curve of the blade gives more control over the width of the area on which the work is being done. Many photographers, however, stick by the razor blade, working with a corner and etching off the spot in a series of microscopic lines.

Let's look at your set-up. Place a comfortable chair near the radio. Set up a card table before the chair. Round up your envelope of prints and your etching tool. Sit down—get comfortable. Remove the print you wish to work on from the envelope. Place one edge of the envelope on the table edge and the other in your lap so you can use the envelope's surface for work. All set? Relax, turn on the radio. Now you're ready to begin.

First, place the print on the envelope. Hold the knife or razor blade perpendicular to the print. In a series of short, straight strokes, move the blade across the dark spot, scraping, not cutting, the paper lightly in one direction only, never in both. To avoid digging into the emulsion, use pressure so light that contact with the surface of the paper can scarcely be felt.

### Practice makes perfect

Practice on an old print. After you get the hang of it you'll be astonished at how quickly the spots will "walk" off the paper, leaving no trace. Lines and larger areas are best scraped a bit at a time with a final going over to catch any inequalities. With practice it is possible to bring a dark spot right down to a perfect match with the surrounding tone. Even spots (Continued on page 68)



The author sits in a comfortable chair with a bridge table drawn close and "spotknocks" a print using the print envelope surface as working space.



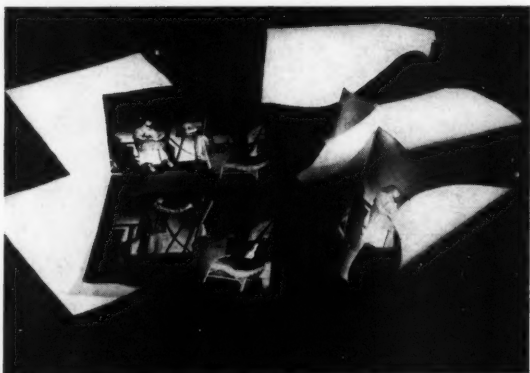
Dark spots may be removed with potassium ferricyanide in a small brush. Action is stopped by sopping spot with a wad of cotton soaked in hypo or water.



For best "touch-up" results you'll need tubes of water colors, mucilage, cotton, eye dropper, blades, brushes, blotter, water bottle, carbon pencil, paint box top.



To etch out dark spot on print, hold blade perpendicular to print, scrape paper surface in short, straight strokes in one direction. Don't dig into emulsion.



You'll have trouble mounting prints unless they are flat. Before flattening, prints often look like those on right. After blotter drying, they appear as left.



To restore sheen, apply varnish formula to print with soft, lintless cloth. If less shiny finish is wanted, use second cloth to wipe much of varnish off.

as large as half an inch in diameter can be lightened without breaking through the emulsion. In case you overlook a spot even after mounting, don't worry. You can still correct the fault with the knife.

The same easy chair, card table, and envelope serve for "spotknocking," which takes care of the white spots. Your other needs are neither difficult nor expensive to acquire. A passable temporary job on untuned prints can be done with a carbon pencil, obtainable at an art store. (A carbon pencil does not leave the sheen characteristic of the ordinary writing or drawing pencil.)

### Using water colors

Larger areas, lines, and toned papers are best spotted with water colors. With them you can match any tone and correct slips of the brush or over-applications of color immediately. If you use water alone, the paint dries to a dead matte surface. But, by adding mucilage to the water, you can match any surface sheen so that the spotting will not be evident from any angle of viewing.

You'll need: small tubes of ivory and black (plus sepia and Prussian blue if you tone prints), a small brush, about a number 2, preferably a round red sable; a cheap brush for transferring and blending colors, and a palette of some kind. I use the three-compartment cover of a child's paintbox, dime store variety. You will also need a small bottle with an eye dropper cap, mucilage, absorbent cotton and, finally, a piece of white blotter or newspaper. The water colors will last for years and might as well be the best money can buy, since some cheaper colors fade with time.

Squeeze out gobs of paint, one of each color, about the size of a lima bean, into the center of your palette. The eye dropper bottle is for the mucilage in water solution. The amount of mucilage in the water is directly proportional to the amount of sheen desired: for semi-matte or lustre paper, about one part mucilage to three parts of water. The higher the gloss, the more mucilage. The proportion, however, is not too critical.

### Mixing colors

Put three drops of the mucilage solution in an end compartment of the palette. Into it, dip the cheap brush. Rub the brush on the black paint gob and transfer this color picked up by the brush to the puddle of mucilage solution. Repeat with the sepia or blue if you are working on toned prints. Wipe the brush clean on the blotter or newspaper and compare the color in the mucilage solution with the tonal values surrounding the white spot to be touched up. If the color is too dark, add water. If the color becomes too light, add the black paint again until the print and mucilage solution colors are fairly well matched. An exact match is unnecessary and nearly impossible. Only a print smeller, one of those guys who views a print while standing nose length away, will be able to detect the "spotknocking."

Now the color is mixed. Dip the small brush into it, wipe several times on the blotter or newspaper to remove nearly all the moisture, and draw the bristles to a fine point by turning the brush slightly as it is pulled down the blotter. Apply the color by light, separate touches of the brush. Don't use long strokes. Don't attempt to work with the brush too moist or the mixture will stand in a small droplet on the paper and (Continued on page 86)

*Enjoy the long winter  
evenings in your  
own darkroom*

## ...THE PLACE WHERE REAL PICTURES ARE BORN

It's pleasant to dream away the long, dark, winter evenings. It's more fun, though, to make dreams come true through the magic of your darkroom work.

This you know, if you already have a darkroom. You know the thrill of seeing a straight record print become a real picture... worthy of being framed and displayed... a picture that brings back the mood you had hoped to capture.

If you don't know the pleasures of darkroom work, or if you're going to introduce a son, a daughter, or a friend to this fascinating hobby, you will want to know all about the Kodak darkroom aids described on the following pages. Your Kodak dealer carries them in stock... and will be glad to help you make your choice.

### KODAK HOBBYIST ENLARGER...

A complete yet inexpensive enlarger, the Kodak Hobbyist gives you *all* the basic features needed for straight enlarging.

It has a cold-light Circline fluorescent lamp, admittedly the best light source for good printing speed and fine contrast, without heat... an "integrating-sphere" head to provide even light distribution and maximum use of available light... smooth up-and-down adjustment on inclined column... elevation lock knob... 1.4 to 7 times enlargement on the baseboard... easy focusing of Kodak Ektanon Lens,  $f/6.3$ , 89mm... click stops for adjustment in the dark... focus lock... circular negative carrier, easy to load and rotate in the enlarger.

Negative carriers are available to handle all films from 24 x 36mm to  $2\frac{1}{4}$  x  $3\frac{3}{4}$ ; and the enlarger is easily disassembled for storage. \$57.50, including Federal Tax.



### KODACRAFT ADVANCED PHOTO-LAB...

Just the thing for a gift to introduce a son, daughter, or a friend to the pleasures of developing and printing... or an easy way to get started yourself. This complete outfit, with full instructions, contains all the essentials for developing films and making contact prints, including an efficient contact printer and film tank. \$13.50, including Federal Tax.

*Prices subject to change without notice. See your Kodak dealer.*



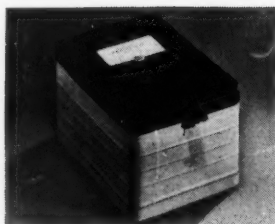
**Kodak**  
TRADE-MARK



*Enjoy the long winter evenings*

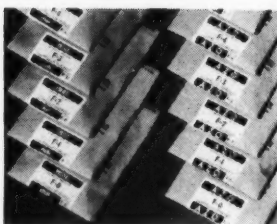
**MAKE THE HOURS EVEN MORE  
ENJOYABLE WITH THESE**

# Kodak darkroom aids



## **KODAK HOME PRINTER...**

for contact prints. Easy to handle, positive in action, and economical in price. It offers you the convenience of strip printing of 35mm and larger roll films; and it handles single negatives up to 4 x 5½ inches... paper up to 5 x 7 inches.



## **AZO...**

contact printing paper will give you prints with slightly warm, black tones. Six contrast grades.

## **VELOX...**

affords a fast contact printing paper of wide latitude. Blue-black tone; six contrasts.



## **KODAK FLUORITE ENLARGER...**

Your darkroom goes really modern when you install this versatile and flexible enlarger. There's practically no limit to its usefulness—for enlarging, copying, close-ups, photomicrography, microfilming, cine-titling, and slide making... or as a view camera.

The exceptionally even illumination provided by the "integrating sphere" lamphouse, and the cold light from the Circline fluorescent lamp (which is properly balanced for color, with normal use of filters) particularly adapt this enlarger to the exacting demands of color work.

Focusing of the Fluorite Enlarger is rapid and accurate, since the knobs for focusing and elevating are so placed that both may be used at the same time. Has long-lasting, chemical-resistant neoprene bellows. Tilting negative carrier platform, with zero indicator, provides distortion control. Rigid column. Big, lighttight storage compartment in base for films or paper. Rotary-type Kodak Glassless Negative Carriers available for negatives from 24 x 36mm to 2¼ x 3¼". Without lens, \$112.50, including Federal Tax.

## **KODABROMIDE...**

Enlarging Paper is noted for its speed and exceptional quality. Of particular importance is its unusual latitude, in both exposure and development. Discards are few. Furnished in five contrast grades, all with a uniform rich black tone.

*Prices subject to change without notice. See your Kodak dealer.*

*in your own darkroom*

The  
**Kodak**  
BULLETIN



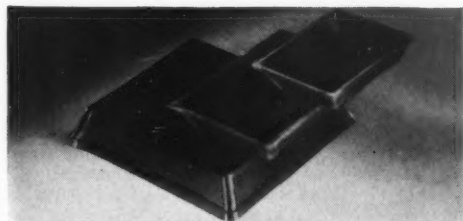
### KODAK MICRODOL DEVELOPER...

Like many other discriminating photographers, once you've tried Kodak Microdol Developer you'll learn to rely on it for all fine-grain processing. It is particularly suited for miniature negatives from which relatively large enlargements are to be made. Development time is short; there is little tendency to form sludge or scum. Liquid or powder.



### KODAK DAY-LOAD TANK...

You take developing out of the dark with this ingenious tank for 35mm magazines. All loading and processing operations can be done in broad daylight. Sturdy corrosion-proof plastic and stainless steel construction mean a lifetime of use. Furnished with complete instructions. Once you've used it, you'll wonder how you ever got along without it.



### KODAK HARD RUBBER TRAYS...

Built of the finest hard rubber for maximum service life. Resistant to all acid and alkaline solutions used in photography. Reinforced for added strength.



### KODAK UNIVERSAL STOP BATH...

The ideal universal stop bath preparation. Handy indicator changes color of bath from yellow to purplish-blue when bath is exhausted.

### KODAK PRINT FLATTENING SOLUTION...

Used after thorough fixing and washing, it will help prevent curling, cracking, and excessive drying.

### KODAK PHOTO-FLO SOLUTION...

Prevents exasperating water marks and streaks on film and paper when drying. Its wetting properties cause water to run off by reducing surface tension.



### KODAK DEKTOL DEVELOPER...

A successor to the long-popular D-72 Developer, Kodak Dektol affords even greater print capacity without sacrifice of print quality. Keeping qualities are 50% greater—stays clear throughout normal life of solution. Available in packets to make three 16-oz. batches, as well as in packages to make 1 quart, half gallon, and one gallon stock solutions.

### KODAK ACID FIXER...

An improved single-powder fixer for films, plates, and papers. Packaged to make solutions of 1 quart, ½ gallon, and 1 gallon.

*Enjoy the long winter evenings  
in your own darkroom*

## ... Learn the real beauty of prints on Kodak Platino

MIDWAY in warmth between Kodabromide and Kodak Opal Papers, Platino makes the ideal paper for the average print ... rich and inviting in its pleasing warmth, yet retaining the brilliance of a colder paper. It is particularly well suited for making exhibition prints of your character studies and other subjects suitable for a warm-tone paper.

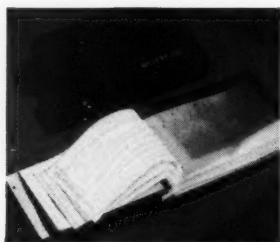
Its ease of manipulation, without any lessening of the final print quality, is another advantage of Platino. It is well suited to work involving a variety of subjects and moods. A slightly warmer tone results from overexposure and a slightly colder tone is as easily obtained through underexposure and consequent change in developing time. Platino also tones beautifully.



Ask for Platino in the following tints, surfaces, and weights:

TINT	BRILLIANCE	SURFACE	SINGLE WEIGHT	DOUBLE WEIGHT
White	Glossy	Smooth	F No. 1, 2, 3	G No. 1, 2, 3
Cream White	Lustre	Fine-Grained		Y No. 1, 2, 3
Cream White	Lustre	Silk		P No. 1, 2, 3
Old Ivory	Lustre	Fine-Grained		

## MOUNTED PICTURES HAVE ADDED APPEAL



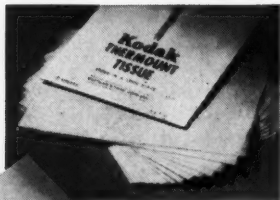
### KODAK NEGATIVE FILES ...

Negatives are always safe, and in easy-to-find order when you make it a habit to keep them in Kodak Negative Files. Made up of transparent, numbered envelopes, bound between sturdy covers. 100 envelopes in each; miniature size holds 200 negatives.



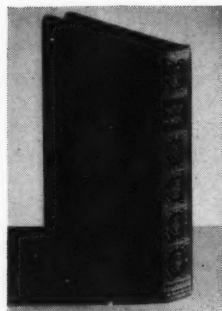
### KODAK THERMOUNT IRON...

Thermostatically controlled to provide just the right degree of heat for use with Kodak Thermount Tissue. Ruggedly constructed for long life and serviceability. It rises to full heat rapidly, and is light in weight.



### THERMOUNT TISSUE...

Kodak Thermount Tissue provides you with a simple, neat, and permanent method of mounting any photograph. It is particularly desirable for mounting color pictures because its melting point permits use of gentle heat.



### KODAK ALBUMS...

The Kodak De Luxe Protecto Album, one of many handsome Kodak albums, is designed to take its place among the finest volumes in your library. Padded genuine leather covers, in a choice of four colors, and stamped in gold. Loose leaf, it contains 12 acetate envelopes for large prints and 12 loose-leaf album pages.



### KODAK PRINT LUSTRE...

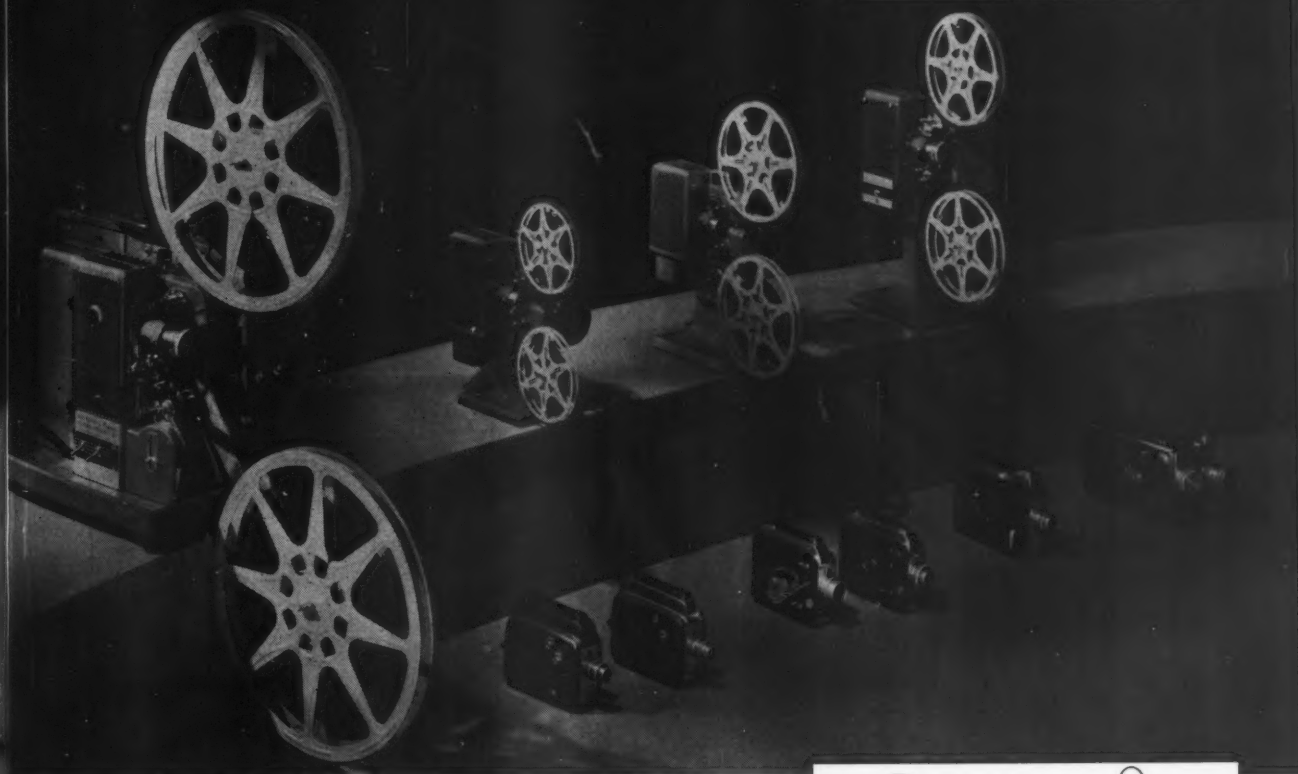
Just a few drops of this Kodak solution can add to the appearance of your prints. It increases the brilliance without altering the texture of prints that are made on matte or rough-surfaced photographic papers.

**EASTMAN KODAK COMPANY**

ROCHESTER 4, N. Y.

**Kodak**  
TRADE MARK

# For Superb Pictures... *in Action*



WHETHER you want an economical movie camera that will give you a living record of your growing family... a rugged and versatile companion to your travels... or a camera that is fully professional in performance... you'll find the motion-picture camera of your choice in these outstanding movie makers by Kodak. And, as a companion to the camera you choose, you will want, of course, a Kodak movie projector.

**Cine-Kodak Reliant Camera** For low-cost 8mm. movies in full color or black-and-white. The lens in the  $f/2.7$  model (1) is factory-set... focusing is never necessary. The  $f/1.9$  model's lens (2) is twice as fast—focuses close. Both feature sprocketless loading, slow motion; take a telephoto. With  $f/1.9$  lens, \$97.50... with  $f/2.7$  lens, only \$84.50... including Federal Tax.

**Cine-Kodak Magazine 8 Camera** Now there are two. The new  $f/2.7$  model (3) needs no focusing, accepts interchangeable lenses—38mm.  $f/2.5$  and 40mm.  $f/1.6$  telephotos. The  $f/1.9$  model (4) permits fast focusing, accepts seven telephotos plus a wide-angle lens. Either takes only seconds to load... type of film can be changed any time without loss. With  $f/2.7$  lens, \$135... with  $f/1.9$ , \$155. Prices include Federal Tax.

**Cine-Kodak Royal Magazine Camera** A new standout (5) among 16mm. cameras, with a superb  $f/1.9$  Kodak Cine Ektar Lens for fast focusing, enclosed view finder, single-frame release, and multiple speeds. The movies it makes are so sharply detailed, they can be shown on screens as wide as 12 feet. With  $f/1.9$  lens—\$192.50, including Federal Tax.

**Cine-Kodak Special II Camera** This superb 16mm. camera (6) now has a new turret accepting any two of the many Kodak Cine accessory lenses. All the controls you need for special cinematic effects built right in. Two finder systems, an adjustable opening shutter, interchangeable 100- or 200-foot film chambers, and either an  $f/1.9$  or  $f/1.4$  Kodak Cine Ektar Lens. Priced from \$898.50, including Federal Tax.

**Kodascope Eight-33 Projector** A handy-to-use projector (8), adequate for 8mm. personal movie showings. The  $f/2$  Lumenized lens and brilliant 500-watt lamp provide clear, sharp pictures 3 feet wide at average projection distance. A quality projector at only \$65.

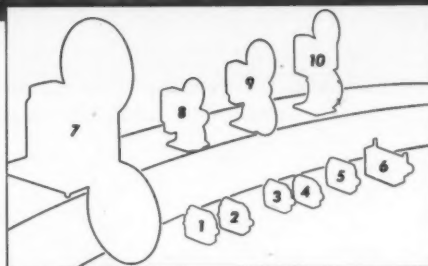
**Kodascope Eight-71A Projector** Kodak's newest, finest 8mm. projector (9)—with a fast  $f/1.6$  Lumenized lens and 750-watt lamp for screenings of unmatched sharpness and brilliance. For super-bright movies, a 1000-watt lamp can be used. Takes 400-foot reels. Clutch-operated rewind. Priced at \$110.

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Two Nuer men from the Sudd. Man on left uses wood ash on face, man on right bleaches hair. Rolleiflex.

## *Elisofon's* **NILE**

**P**HOTOGRAPHS on these and the following two pages are but six of the 130 on display at the Museum of Natural History in New York City till January 29th. They are a study of the Nile River done in 1947 for *Life* by photographer Eliot Elisofon.

Mr. Elisofon began his photographic life in advertising photography, moved into public attention through his fine documentary studies of East Side children. "I wanted to point a camera," he said in those days (1939), "at things that I thought needed attention."

Since then Mr. Elisofon has pointed his camera at the world: Fiji, New Guinea, Cambodia, Peru, Chile, Hawaii, Africa. All this to the ethnologists' delight. They've never before had such beautiful and honest photographs as tools for study and research.

These photographs were taken with three cameras: Contax (with wide angle or telephoto lens for fast reporting); Rolleiflex (for candid portraits, views from moving boats or planes); Linhof (for temples, tombs, etc.).



**A native of the Sudd patches his thatched roof. Taken with Contax, 35mm (wide angle) Biogon lens.**



**Boys at Wadi Halfa where Black Nile becomes White Nile and Arabs first appear.**

**FEBRUARY, 1951**





Excellent composed shot above was taken in street at Wadi Halfa. Note goat in background which obligingly moved into perfect position. Portrait to left was taken with a Rolleiflex. Nuer men like this one all have forehead scarification. Effectiveness of contrast in white necklace against black neck is heightened by photographer's careful treatment. Nuer man to right wears helmet of mud, cow urine, dung—to bleach hair. Mudpack taken off after two weeks.





# formula for filming

*More professional tips  
for home movie makers*

*Second of a series*

by JOSEPH V. MASCELLI

ONE of the biggest stumbling blocks in the way of the movie photographer is—composition.

The reason for this continuing problem can be stated very simply. Motion pictures can't be cropped on an enlarging easel. The movie frame is a fixed horizontal rectangle with a three to four ratio. It can't be changed. If you place your subject matter in the lower left-hand corner—it will remain there. Movie makers must learn to compose carefully to the edge of the frame and to space their subject matter very accurately. To overcome the two-dimensional flatness of the movie screen, compose your subject matter in several distinct planes either by placement of the various people and objects in the scene, or by creating definite areas of light and shadow. Utilize all the basic rules of good still composition. Frame your subject whenever possible, use lead lines and S-curves, counterbalance light and shadow, take advantage of any unusual texture or gradation of tones. In short: do anything that is permissible in stills, but do it in the finder during the actual shooting time.

## ***Motion in composition***

Bear in mind that the composition must remain fluid since you are dealing with moving forms. A well composed picture at the beginning of a scene can wind up a nightmare if the composition for the entire shot isn't planned. Have your subject walk through the scene before filming so that you can plan your composition throughout the shot. You may find that a slight difference in movement or a change of camera angle will vastly improve the shot.

The movie maker has one tremendous advantage over the still photographer—*movement!* While the still pho-



If your subject matter is too "tight" for your normal lens, switch to a wide angle. If you can't approach close enough, use a telephoto lens instead.



In a travel film, sports reel or movie parade, you can cut away from the actual scene to a person or group of persons watching the action intently.

tographer must emphasize his principal subject with careful composition, lighting and angle—the motion picture cameraman easily can capture the audience's eye through movement alone.

Always have your subject favor the camera with his actions so that nothing is hidden from the camera lens. Plan your compositions so that the subject can make an entrance and an exit. When filming static objects, never place them in the exact center of the frame—this is the weakest position. Always set them slightly off center—allow a bit more room in the direction in which they are facing. In outdoor shots of scenery, place your horizon either one-third from the top or the bottom of the frame—according to whether the sky or the ground is the more important part of the shot.

The availability of both wide-angle and telephoto lenses greatly simplifies the problems of composition. If the subject matter is too "tight" for your normal lens—switch to a wide-angle objective. If you can't approach close enough for a full screen shot—use a telephoto lens.

### ***The close-up packs the punch***

Years of viewing professional films have conditioned movie-goers to expect close-ups—don't disappoint them. They are "the spice of the program"—they create an intimate atmosphere and transport your audience *into* the scene. Amateur movie makers have an aversion to moving in close—they want to "get everything in the picture." Everyone has a natural curiosity to examine objects closely and to get acquainted with people. Once your locale and people are established—move in close and really go to work.

Close-ups need not be of people alone—shots of platters of food heaped on a picnic table, signs, flowers, hands at work and at play, toys, tools, instruments, clocks and watches, all can be used to enhance your films.

Close-ups fall into two main categories—*cut-in* close-ups and *cut-away* close-ups. Cut-in close-ups are large full screen shots of people or objects that cut *into* the principal action taking place in the long or medium shot. Dad puts a piece of wood in his lathe. As he places his chisel in position to make a cut, the camera moves in to a large full screen close-up so that the audience may see how skillfully he applies the tool and accomplishes the work. Junior searches for a book on the library shelf—as he reaches for it we cut to a tight close-up allowing us to read the title as his hand pulls it out. Always use a cut-in close-up when action taking place in the long shot can not be made intelligible from a distance. Example: Sis is all dressed up and waiting in the parlor for her date. She is anxiously looking out the window—but the cut-in close-up of her fingers nervously strumming on the sill really tells the story of her impatience.

It is very important to *orient* close-ups, especially large full screen shots, by first firmly establishing their position in a long or medium shot—otherwise the audience will be at a loss and become confused when confronted with a large object and wonder where it belongs or where the action is taking place.

### ***Cut-away close-ups add zest***

While *cut-in* close-ups must consist of people or objects already existing in the established long shot, *cut-away* close-ups, on the other hand, are of side events

related to the main action and consist of entirely separate action going on elsewhere at the same time. In a travel film, sports reel or parade movie, we can cut-away from the actual scene to a reaction close-up of someone watching intently. Reaction close-ups will add human interest to films which are otherwise impersonal. A shot of men at work followed by a cut-away close-up of a whistle blowing tells us it's quitting time. Two separate and distinct shots thus create a story through cutting alone.

Utilizing cut-away close-ups enhances the action of our established scene through the skillful use of related material near at hand or even staged later at our convenience. If you find, upon returning home, that your vacation film contains many long scenic shots following close upon one another, it's very simple to shoot several tight close-up reaction shots of various members of the family supposedly admiring the view. If you shoot against the sky under lighting conditions (*Continued on page 84*)



The subject should contribute to the action in a film, not the camera. Allow your subject to move within a fixed frame and your films will appear more professional.



In outdoor shots of scenery, place your horizon either one-third from the top or bottom of the frame according to whether the sky or the ground is more important.

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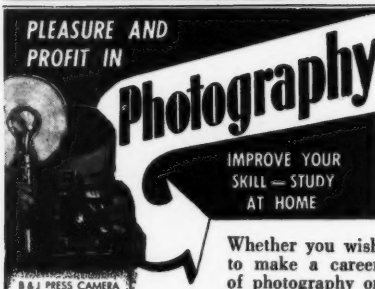
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# Dr. Cinema Says

## The subject is lenses

For some reason, the average amateur movie addict knows and cares less about lenses than does his counterpart in the still-camera group. Oh, he knows that a "fast" lens is good stuff, especially for color work. And he may be familiar with the various focal lengths and their uses in filming and projection. But your week-end still-picture shooter can give you a stacked deck and still lick you where optics are concerned. He talks almost knowingly about such esoteric things as front elements, depth of field, Tessar-type, nodal points, and other items which make optical engineers worth their salt.

The incongruous part of all this is that a good movie camera lens must do things which the average still-camera lens rarely, if ever, is called upon to emulate. Just consider what a terrific blow-up results when an 8mm frame is projected to fill even a 30 x 40-inch screen, and you begin to get the idea.

## Is a fast lens better?

Let's take up this matter of lens speed for a minute. A fast lens is not necessarily a good lens. Speed may be—I said *may* be—gained at the expense of definition or flatness of field, through the use of poor glass, sloppy design and methods, and so on. Never forget that a good fast lens is really difficult and expensive to make. (Take the word of one who has ground, polished, and inspected the things!) True, 8 out of 10 customers may never realize that there's much wrong with a cut-rate f/1.9—their movies look pretty good to them, and who's going to run a comparison test for them? But you'll be better off with a really good f/2.5, insofar as sharpness and color-correction are concerned.

All right—then why is an f/1.6 projection lens so much less costly than an f/2 camera lens? Here's the answer: Your projection lens has only to focus the image in one plane (the screen surface, in normal use), whereas the camera lens must have sufficient inherent depth to focus on objects in different planes simultaneously. In the projected image you can see that Cousin Joe is pretty sharp (optically speaking, anyhow) even though he's standing six feet back of Aunt Grace, who's also rendered with adequate sharpness. That depth of field was recorded on film by the camera lens, the image merely being passed along by the projection lens.

## Slow lens, sharper image

Projection lenses, it is true, operate on the same principles as camera lenses. They do not have diaphragms,

as a rule, being used at their maximum apertures. This is because in projecting pictures you generally want the lens to pass all possible light, while in taking pictures you must control the light admitted according to existing conditions (light level, camera speed, emulsion sensitivity, etc.). And get this: A "slow" projection lens tends to give a somewhat sharper image than a fast one of the same focal length, because the smaller the aperture the greater the depth and the flatter the field, within reasonable limits.

I can recall having watched the initial screening of a commercial film, when the studio boys wanted the client to see the finished product at its very best. Normally the 16mm projector would have been fitted with a 750-watt lamp and an f/1.6 lens. The wily projectionist, however, brought along his own rig, which was equipped with a 1000-watt lamp and what appeared to me to be a beat-up old f/2 projection lens. The latter, it seemed, was known to be the sharpest-cutting collection of glass in the shop, and it really did a job. I've learned since that it's not uncommon to get better 16mm results in projection with a 2-inch f/2 than with a 2-inch f/1.6.

Me? I go along using a regular run-of-the-counter 2-inch f/1.6 most of the time, and I like it very much. But purists may want to investigate the slower models to see how sharp you can get.

## Fixed-focus "universal" lenses

Back to camera lenses for a moment before the class is dismissed. The shorter the focal length of a lens the more inherent depth it will have. That's why we can get satisfactory results with "universal" or fixed-focus lenses in the ½-inch and (in some cases) the 1-inch focal lengths, even at fairly wide apertures such as f/2 or f/2.5. A box camera has a fixed-focus lens with a focal length of anywhere from 3 to 5 inches—but note that a box camera lens is used at anywhere from f/11 to f/14 or thereabouts. Here the small aperture affords the required depth. In the fixed-focus movie-camera lens, depth is achieved by means of short focal length, even wide open.

But point for point your fixed-focus movie-camera lens must be designed and made with many times the precision required in the case of the box camera lens. This is because it records a tiny image which must "hold together" even at terrific enlargement in projection, whereas the box camera's negatives usually are contact-printed, same size. And another reason is that the movie-camera lens must gather a lot of light and cram it through a tiny camera aperture very close behind it.

(Continued on next page)



# New Home Movies

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**David Livingstone** tells the inspiring documentary story of Dr. Livingstone's medical and missionary work among the natives of Africa, his rumored death and his rescue by journalist Henry M. Stanley. 15 min., 16mm sound.

**David the Shepherd Boy** is the latest of the J. Arthur Rank Sermon Films. It pictures David's anointment by the prophet Samuel, his friendship with Jonathan, and his mighty battle with Goliath, the Philistine. 22 min., 16mm sound.

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## DR. CINEMA SAYS

(Continued from preceding page)

In case some of you fell off the sled at the first turn, forgive me. We want this column to be informative, and it's hoped that a majority of the folks got something out of the current effort and the one which preceded it. One way to assure yourself of getting what you want here is to drop me a line and tell me what you want discussed. Questions from readers will, when of sufficiently general interest, be kicked around in this space.

So send 'em in—now.—THE END

FEBRUARY, 1951

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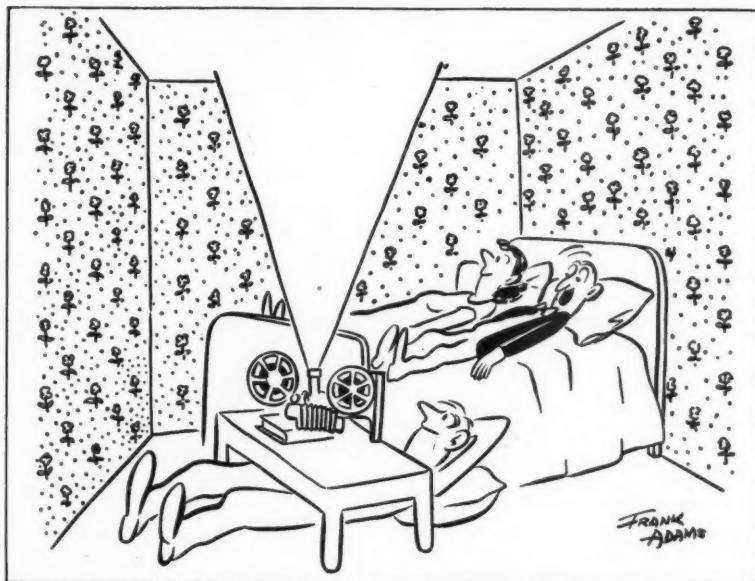
## KODAK ISSUES DATA BOOK ON COLOR MOVIE FILM

Another Kodak Data Book, "Kodachrome Films for Miniature and Movie Cameras," is now available for 35 cents from Kodak dealers. The book is an outgrowth of the former Kodak Data Book entitled "Kodachrome and Kodacolor Films."

The new publication contains considerably expanded material on picture taking indoors and more information on storage and care of color films. New color illustrations have also been included; the data sheets have been completely revised, and references to cameras and equipment for color work have been brought up to date.

The Kodak Flexichrome Process for making color prints is described in detail in a new Kodak Color Data Book available for 50 cents at all Kodak dealers. The book, containing 40 pages with six in full color, is punched to fit the Kodak Color Handbook. It provides complete working instructions for the process, together with details of special applications.

The text for the Data Book is divided



"You really shouldn't have gone to so much trouble..."

into the following sections: The Process in Brief; Materials and Equipment; The Negative; Making the Print; Coloring

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*P.S. If you don't see it—what a shame, For Lana (me)—has quite a frame!*

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## FORMULA FOR FILMING

(Continued from page 79)

closely approximating the original footage, it will be no problem to "cheat cut" them into your movie without detection.

Both cut-in and cut-away close-ups will enliven your movie, help bridge jump cuts and will break up long scenes or cover a time lapse in the original action. Most close-ups should be short in duration, since their size and isolation tell their story immediately.

While it is essentially true that motion pictures must move, it is the subject that should contribute to the movement—not the camera. Allow your subject to move about within a fixed frame and your films will appear much more professional than if you constantly move your camera as if you were watering the garden with a hose. Constant camera movement, especially hand-held, results in screen dance—an annoyance which creates undue eye strain in your audience.

### Be prepared, like Boy Scouts

Amateur movie makers miss many priceless shots because they aren't prepared. In filming planned or staged movies, you can have your subject do whatever you desire whenever you're ready. Sufficient time can be taken to choose the right lens, set the diaphragm, check focus and angle, and make certain that everything in the scene is exactly as desired.

Covering parades, sporting events, air shows or other happenings of a spontaneous nature is a bit more difficult. When there's no chance for a rehearsal or second take, you must be in condition for the best possible shot when the opportunity occurs by preparing yourself and your camera in advance. This requires thinking ahead. Once things begin to happen it's too late to prepare. Be sure the camera is wound, the lens set for the prevailing conditions and focused at the hyperfocal distance for maximum depth of field. Better to be prepared and never make the shot, than to miss a good shot because of the lack of sufficient time to set your camera and move into position.

Have a plan but be free to alter it if events change. Always be on the lookout for the unusual or unexpected action that may pop up at the next moment. The lucky cameraman possesses both the technical ability and the presence of mind and alertness to take advantage of any sudden opportunity that may present itself. Remember: *anticipate action.*

### Watch your backgrounds

Amateur movie cameramen pay little or no attention to their backgrounds. Even a plain sky is better than a cluttered, inappropriate or badly chosen background. Many advanced movie makers avoid backgrounds that will

clash with their subject by using plain walls or by keeping the background in shadow so that the audience will not be distracted from the principal object of interest. However, a properly chosen background will help tell your story by allowing your subjects to move in an appropriate locale and tie them in more closely with the activities suggested by the surroundings.

Example: Your family visits an amusement park. What better way to film your movie than by picturing them against backgrounds of the roller coaster, the fun house and the merry-go-round? The excitement, the carefree abandon of a day of rare fun, is told not only by the people in the foreground but by association with the background as well.

Many amateurs concern themselves with the background only when filming the long shot. The background is important throughout the film. At the airport, show the distant hangars and flight line when you shoot a medium or close shot of your friends climbing aboard their plane. In your vacation or travel movie show your family in relation to the scenic wonders of the site. Don't film an opening long shot and then shoot closer scenes that could have been photographed in your own backyard! At the seashore shoot your medium and close shots with the rolling waves as a background. In the mountains plan the action—hiking, camping, eating—against a background that describes the location. The background should show that the movie was made *here* and nowhere else.

### What are bad backgrounds?

There are a few minor annoyances that should be avoided in backgrounds whenever possible:

Beware of prominent lines, forms or masses that are eye-pulling—they will tear your audience's interest away from the main subject.

Avoid hot corners—any bright spots of light near a corner of the frame—they will lead the eye out of the picture.

Avoid motion, especially if out of focus, in your background—it will prove disturbing.

When filming in color, avoid tiny out of focus spots (such as a flower bed) in the background—they are particularly annoying if very numerous, since they appear as countless colored circles of confusion.

Good home movies aren't impossible. But, they don't just occur by luck. Before you press that button and hear the whir of the film traveling through the camera's film gate, put on your thinking cap. There's a lot more to making movies than meets the eye.—THE END

(Editor's Note: Next month, Mr. Mascelli will conclude his "Formula for Filming" series with a discussion of tri-pods and panning techniques.)

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# photo data

Filters for use  
with color films

There's hardly any aspect of photography more confusing than the array of filters available and the variety of names and initials by which they are identified. Worst offenders of the lot are the filters for use with color films.

To simplify matters somewhat MODERN PHOTOGRAPHY presents a list of the color films which amateurs are most likely to encounter, together with the manufacturers' most recent filter recommendations. This is the first publication of the revised Ansco data.

By and large, the most commonly used filters for color film can be classified into three groups: (1) ultra-violet absorbing, for use with daylight type films to counteract the effect of distant haze, or "warm up" pictures taken in the shade; (2) light balancing, for changing the color quality of the exposing light in order to secure proper color balance with tungsten type films; (3) conversion, to permit the use of daylight type films with tungsten, flash, and other light sources, or tungsten type films with daylight, etc.

There are also numerous color compensating (CC) filters used to make changes in the overall color balance of pictures, and to compensate for deficiencies in the quality of the light by which color film must sometimes be exposed.

As color films undergo periodic improvement, filter recommendations may change from time to time. For safety, always examine the instruction slip with each film package for the latest filter recommendations. J. W.

## FILTER DATA FOR ANSCO COLOR FILMS

Lighting Conditions	Ansco Color Daylight	Ansco Color Tungsten
Daylight—clear	none required	Conversion #11
Daylight—overcast bluish	U. V. — 15	
Daylight—distant scenes	U. V. — 16	
Electronic Flash	none required	Conversion #12 or CC 25 + CC 26
Blue Flash Lamps	none required	
Daylight Fluorescent Lamps (5500°K)	CC 34	
White Flame Carbon Arc (5000°K)		Conversion #11 or CC 25 + CC 43
Blue Photo Flood	not recommended	not recommended
3200 K Lamps	Conversion #10	none required
Photo Flood Lamps	Conversion #10	U. V. — 15
Flash Lamps #5, 6, 11, 22, 31, 50; 2, 2A, 3, 25, 26, 40		U. V. — 16
3M Flash Lamps } 3F Flash Lamps } not recommended		
White Fluorescent Lamps (3500°K)		Conversion #13
Standard Cool White Fluorescent Lamps	not recommended	not recommended

## Filter Data For Kodak Color Films

LIGHTING CONDITIONS	Kodachrome and Kodak Ektachrome Films DAYLIGHT TYPE	Kodachrome Professional and Kodak Ektachrome Films TYPE B	Kodachrome Film TYPE A
Daylight. Clear or hazy sun casting sharp or soft shadows.	no filter required (See Note 1)	No. 85B (See Note 2)	Type A Filter for Daylight (No. 85) (See Note 2)
Daylight. Bluish—open shade or overcast. No shadows.	Skylight (No. 1A) (See Note 3)	No. 85B (See Note 2)	Type A Filter for Daylight (No. 85) (See Note 2)
Daylight. Distant scenes, mountain and aerial photography.	Skylight (No. 1A) (See Note 3)	No. 85B (See Note 2)	Type A Filter for Daylight (No. 85) (See Note 2)
Kodatron Flash Tubes FT-402, FT-403, and FT-503	Kodachrome: No. 81C Ektachrome: See film instructions	N. R.	N. R.
Blue Flash Lamps	no filter required	N. R.	N. R.
Daylight Fluorescent Lamps	Kodachrome: CC-20B Ektachrome: CC-10M + CC-85B	N. R.	N. R.
White-Flame Carbon Arc Lamps	CC-40Y	N. R.	N. R.
Blue Photo Flood Lamps	N. R.	N. R.	N. R.
3200 K Lamps	No. 80 + No. 82A	no filter required	No. 82A
Photo Flood Lamps	Kodachrome Filter for Photo Flood (No. 80) (See Note 4)	No. 81A	no filter required
Flash Lamps No. 5, 6, 11, 22, 31, and 50	N. R.	No. 81E	No. 81C
Flash Lamps No. 0, 2, 2A, 3, 25, 26, and 40	N. R.	No. 81F	No. 81D
3M Flash Lamps	N. R.	N. R.	no filter required
3F Flash Lamps	N. R.	N. R.	No. 81A
3500 White Fluorescent Lamps	N. R.	CC-20R + CC-85B	CC-10Y + CC-20M
Standard Cool White Fluorescent Lamps	N. R.	Kodachrome: CC-60Y + CC-30M Ektachrome: CC-60Y + CC-40M	CC-40Y + CC-30M

N. R. means Not Recommended

KODACOLOR FILM, DAYLIGHT TYPE, should be exposed only in daylight or with blue flash lamps, and under these conditions, no filter is required. A Kodak Pola-Screen can be used as described in Note 1, below.

KODACOLOR FILM, TYPE A, should be exposed without a filter in clear photo flood or flash-lamp illumination, or with the Kodak Wratten filter No. 85 in daylight. No other filters should be used.

KODAK EKTACOLOR FILM, TYPE B, is balanced for exposure with 3200°K lamps. Filter recommendations for other commonly used light sources are given on the supplementary data sheet packed in each box of film.


Note 1—A Kodak Pola-Screen is recommended for darkening blue skies, reducing light bluish haze in distant scenes lighted by clear sun from the side or overhead, and subduing oblique reflections from nonmetallic surfaces, thus increasing color saturation.

Note 2—The Kodak Wratten filters No. 85 and 85B currently being manufactured have improved stability. If the filter being used is several years old, its replacement is suggested. Although Type A and Type B color films will usually give satisfactory results in daylight with the appropriate filters, the use of daylight type color films is preferable.

Note 3—The Kodak Skylight filter is intended for use with daylight type color films outdoors when the lighting conditions are such that pictures made without a filter would be too bluish. This filter should be used primarily for pictures taken in open shade under a clear blue sky. Occasionally it is useful for pictures taken on an overcast day and for distant scenes, mountain views, sunlit snow scenes, or aerial photographs.

Note 4—The combination of daylight type films and Kodachrome filter for photo flood (Kodak Wratten No. 80) is suggested for emergency use only, because it requires four times the exposure for Type A or Type B films with photo flood lamps, and the color rendition is not as good.

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# behind the scenes

news of the  
photo industry

### Will there be shortages?

Shortages of new cameras and other photo equipment during 1951 are quite probable. The National Production Authority has already drastically reduced the amount of critical metals which can be used to make products for civilian purposes. There will be more restrictions in the future. In addition, photographic manufacturers will be getting war orders which will cut the production time available for making civilian goods. Combine these two factors and the result is an eventual shortage in U.S.-made photo equipment.

### What about foreign cameras?

Unless foreign manufacturers are forced by their respective governments to convert to the manufacture of war goods, there will be no restrictions on the flow of foreign-made cameras into the U. S.

Some cameras which heretofore were not imported because of price or superiority of similar American-made models, will find their way into the U.S. market. Germany is the chief foreign supplier of cameras to the U.S. and at the present writing there is no definite indication that German camera makers are going to produce war goods.

### "It was in the cards . . ."

Samuel Goldstein, President of Commonwealth Pictures, Inc., of New York, makers of home movies, and Horace O. Jones, Vice-President of the Victor Animatograph Corp., were both riding the 6:13 P.M. commuter train of the Long Island Railroad out of Pennsylvania Station on Thanksgiving eve.

Goldstein loved to play pinochle on his way home each night with cronies who invariably rode in the first car. Jones didn't play pinochle. He rode in the middle of the train. His aversion

to pinochle saved his life. Near Kew Gardens, a collision took place. Over 70 commuters died including most of the passengers in the first car, Goldstein had played his last game of pinochle.

### All's fair in Cologne

The American Photographic Manufacturers and Distributors Association has been invited to sponsor an all-American exhibit at the Photokina, the International Photo and Movie Fair to be held in Cologne, Germany, next April. More than 20,000 buyers from all over the world are expected to attend.

If this year's fair is anything like the size of last, it'll be a tremendous undertaking. Last year's event covered about 250,000 square feet in the Cologne Fair Hall and contained about 300 booths. One observer estimated that it was about twice as large as the Cleveland Trade Show of the Master Photo Dealers' & Finishers' Association, the biggest photographic gathering in the U. S. A.

### Photo prices lagging behind

Although wholesale prices in farm and food products have risen 100 percent or more during the past ten years, Eastman Kodak Co. reports that it has been able to hold its average wholesale selling prices to 24 percent above August 1939.

To the amateur, whose income has probably risen more than 24 percent in this period, the figures mean he is now, on the average, actually paying less for his photographic equipment in relation to his salary than before World War II.

Kodak also reports that sales of sensitized products including amateur roll film, both black and white and color, photographic paper, and Kodachrome and Kodacolor prints have been continually increasing.

### AFTER THE BATH

(Continued from page 68)

will leave a ring of intense color with a white center after it has dried.

Light lines resulting from negative scratches are best taken care of with a series of short touches rather than with one sweep. Large spots should be treated in several such series with plenty of time for drying between each series.

The tone of the color in the little puddle can be varied as needed. That's one reason for keeping it small. For touching spots in skies and clouds, you will want

to dilute the color. Sometimes it is possible to tilt the palette so as to get thick and thin distributions of color in one puddle.

### Removing excess color

An over-enthusiastic application of color can be removed with a cotton wad. If it has dried, a touch with a moistened finger tip will do the trick. If color has been thus removed, wait a few seconds for drying before doing more spotting. A slight excess of color can sometimes be removed from a partially dry spot by the touch of a dry fingertip. It's this ease in



correcting mistakes which makes this method so practical.

When finished, rinse the brushes and wipe them to a good point. The palette with its pool of color can be stored without cleaning. Next time you wish to spot-knock, two or three drops of plain water and a stir with the cheap brush will get you under way.

### The final problem

Your final problem is to take care of the dulled sheen of the print where the etching knife was used, and to balance the variations in sheen where the mucilage and water mixture used in spotting does not quite match the paper surface. Fixing the etched spots is easy. Apply clear water and mucilage mixed to the proper proportions with a clean brush. Glossy prints are always treated this way, since they cannot be squeegeed after spotting and skiving because the wetting would remove the colors. The best method of restoring an over-all sheen on other surfaces is to give the entire print a coat of varnish.

### Formula for print varnish

When a print comes out of the wash water, it has a juicy, rich appearance which seems to get lost somewhere in the blotters. A good varnishing restores this wet print richness without producing the reflection and glare of the ferrotyped glossy. The following is a varnish formula worked out by Harry Shigeta and Sam Silverstein. It has been used successfully over a number of years. All materials are obtainable at an artist's supply house.

One part (by volume) Copal varnish  
One part Linseed oil  
One part Benzoin or benzene  
Two parts Turpentine

Apply the varnish with a pad of soft, lintless cloth. Check the evenness of application by looking across the print toward the light. By applying the varnish liberally and evenly, rubbing no more than is necessary, you will get the nearest approach to a glossy print.

### A less shiny finish

If you prefer a less shiny finish, use a second cloth to wipe much of the varnish off and rub the remainder smooth. Then stand the print in a dust-free place and allow it to dry for forty-eight hours or longer, depending on the thickness of the application.

Now let's go back to those prints swimming in the final wash. Even with the small surface blemishes, they look pretty good, don't they? Sure it'd be much easier to dry them and let it go at that. But when friends look at your prints and tell you they're terrific, you'll know that the little extra time and effort put into finishing the prints are well worth it. Try it and see.—THE END

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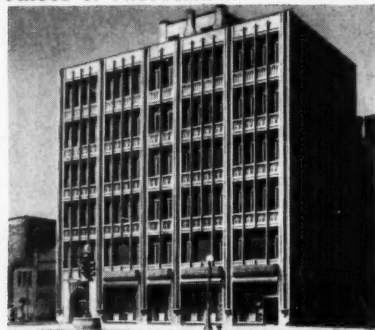
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## QUICK PRINTS FROM COLOR MOVIE FRAMES MADE ON NEW DIAVERSAL MONOCHROME PAPER

Diaversal is the name of a new paper—really a whole new photographic process—that has been developed by the Gevaert Company of Belgium. We understand the name to mean *dia*—two-layer and *versal*—reversal. For that is what the paper is, a two-layer, self-reversing, enlarging paper.

The process was first publicized a little over a year ago, but it is now reaching the market in company with enlargers for 8mm and 16mm movie films. The whole process is a package unit of papers and the special chemicals required for processing.

Because so many movie makers have tried so many ways, most of them either costly or time consuming, to make prints for their friends and their albums from the tiny frames of the sub-standard films, the first commercial application of the process has been in this field.

### It's a simple process

The process is very simple and if you buy the regular kit you don't need anything else except a darkened room to work in. If you have your own enlarger and darkroom you need buy only the chemical kit and the paper in the size you want.

The Diaversal paper is a special enlarging paper on which is coated two layers of emulsion. The top layer is a fast bromide which is almost identical with the Gevaert Company's Novabrom. The special layer on the paper itself is designed to receive the final image through chemical means.

An average color frame in the Revere 16mm Enlarger-Viewer requires an exposure of about 10 seconds at f/5.6. A 35mm slide in a low-powered enlarger took an exposure of 40 seconds.

### Starts in paper developer

After exposure, the paper is placed in the first solution, a regular paper developer. Developing time is 1 minute. Agitation is normal and it is handled just like any other enlargement. However, the image is a negative.

When the minute is up the print is drained and placed in the second, or transfer bath, pushed under and allowed to remain quietly for two minutes. At the end of the first minute the white light may be turned on if desired.

In the transfer bath the reversal takes place. The silver bromide grains which were not used in forming the negative image migrate to the lower layer of emulsion. No visible change takes place in the image.

At the end of two minutes the print is placed in running water and washed.



Diaversal copy of Tana Hoban's color transparency, reproduced on page 36.

The negative picture image can now be scrubbed off, or washed off with warm water. A wad of cotton or a sponge may be used for the scrubbing.

### Ends with sepia toning

After the first minute in the toner the print is quite reddish. The tone deepens and at the end of two minutes it is like a gravure brown, chocolaty in color. In three minutes it is the deep, warm brown that selenium gives. For the toner is a selenium toner, Gevaert Vitol, in fact.

Any paper developer can be used, and any selenium toner. Only the second bath, the transfer solution is special, and its formula has not been revealed. All three solutions are available as a kit, the quantity furnished being enough for about a gallon of each bath.

The paper is currently available only in 2 1/4 x 3 1/4 and 4 x 5 inch sizes. It will be available in larger sizes later this year.

### Why Diaversal works

One oddity about this process is the way in which a color-blind paper emulsion is used to reproduce color originals in monochrome.

One would think that reds would reproduce black and blues white, as the old color-blind film always did. It would, too, but for one thing. No color film has pure colors in any layer. Each layer of a multilayer film is mixed with a small percentage of the other two colors. The presence of these strangers in the reproducing layers makes Diaversal possible, and at the same time makes ordinary color duping or color printing a problem.

Take a look at the illustration at the head of this article. It is a Diaversal  
(Continued on page 100)

## THIS MONTH'S COVER

(Continued from page 57)

height slightly above camera level. Since the purpose of the second or "fill-in" light was to partially illuminate the shadows created by the main light, it was placed about seven feet away from our girl. The original positioning of the main and fill lights at this point (Fig. 2) was only tentative. Alexander moved both lights carefully a few inches one way or another, until he had established the best locations for balance.

The next step in the lighting sequence was to train two 500 watt spotlights on Barbara as shown in Fig. 3. These spots were located far enough back to avoid spilling light into the face, and far enough to the side to be out of range for the camera lens. The purpose of the twin spots was to "rim light" the figure so it would stand out with something of a third-dimensional quality against the solid black background. Without the rim lights, much of the sparkle and naturalness of the picture would have been lacking.

The fifth light, a 500 watt spot, was lifted (stand and all) to the ceiling where it was lashed to an overhead pipe. (Fig. 4). Instead of letting Barbara stand directly below this spotlight, Alexander asked her to move far enough forward to prevent shadows from appearing below her brows, nose, and chin. The main force of the overhead light, in other words, was directed from the brow line back.

### Cellophane makes the cover

Alexander's pet camera is a 4 x 5 Graflex with an f/4.5 Kodak Anastigmat lens which he bought 11 years ago. In color work he has a strong preference for Ektachrome cut film because he believes it gives him more brilliant color renditions than he can obtain from any other color emulsions.

Cindy Jewel was wearing ordinary street make-up when the cover transparency was made. This consisted of pancake powder base, lipstick, rouge, a little eye-shadow. Alexander made five pictures of her in rapid succession, all exposed 1/2 second at f/7 according to meter reading. For the sixth and last exposure, he placed a piece of red cellophane over the lens of the right hand rim light. "It was just a sudden hunch that made me decide to use the cellophane," says he. "Visually it didn't make a lot of difference at the time—yet in the sixth transparency it makes all the difference in the world."

And so it does. Alexander's use of a scrap of cellophane resulted, in this case, in the difference between six "near misses"—and a "sure-fire" cover shot.

—Art Ahlers.



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**THOMAS EAKINS**

(Continued from page 49)

It was about this time that he came in contact with Eadweard Muybridge. Muybridge had been commissioned in 1873 by Leland Stanford, the Governor of California, to show in photographs that a galloping horse, at some time during its gait, takes all four hooves from the ground. Stanford had wagered a friend \$25,000 that this was true.

With the rude equipment of the day (wet plates were still in use) Muybridge went to work. It was not until 1877 that the series of experiments came to a successful conclusion. With a battery of 24 cameras, he took pictures of a passing horse in rapid succession against a slanting board fence covered with rock salt for better reflection.

The experiments cost Stanford at least twice the amount he won.

Eakins was fascinated by the Muybridge experiments. He obtained copies of the photographs and studied them carefully. He made lantern slides which he used as visual aids in his art classes. And he wrote Muybridge suggesting that he superimpose scales of measurement over the horse in printing.

It has been suggested by Beaumont Newhall (in his book, *The History of Photography from 1839 to the Present Day*) that "It is not unlikely that Eakins instigated the invitation extended to Muybridge by the Trustees of the University of Pennsylvania to continue his work under their auspices in Philadelphia."

Thomas Eakins was a member of the committee that worked with Muybridge in Philadelphia, for two years (1883-85). He soon discovered certain flaws in Muybridge's methods. The 24 cameras took pictures from 24 different standpoints, thus making scientific comparison impossible. The time interval between each of the 24 exposures was not exactly the same.

**Improving on Muybridge**

Eakins suggested the use of a single camera, which would have the viewpoint for all exposures. He worked out a system for better timed exposures by the use of two small disks, one revolving eight times as fast as the other. He improved the instantaneous shutter. He developed a moving diaphragm to exclude light. All these novel developments worked out well—so well that Muybridge relinquished his old method in favor of Eakins'.

It is almost unbelievable that Eakins' prophetic work, pioneering in the important field of motion pictures, should have been so unnoticed and be hardly known even now. Lloyd Goodrich in his careful Eakins biography mentions these facts but Robert Taft, for instance, in

his *Photography and the American Scene* does not mention Eakins at all in his chapter on Muybridge's work. When the Eakins' Centennial Exhibition at Manhattan's Knoedler art gallery was presented in 1944, some of these remarkable early photographs were shown. Yet they found little attention. Crude and primitive as these pictures were they represent *probably the first one camera sequence action shots of human beings* ever made, forerunners of Gjon Mili's strobe photographs.

**What's a zoetrope?**

Eakins would have been the last man in the world to consider himself as the inventor of the movie camera—but there is no gainsaying the fact that he applied the basic principles of modern movie cameras. It is also quite possible that Eakins was the first man in America to show moving pictures taken from a single viewpoint: he spoke in 1884 or '85 on the "Motion of the Horse" using a "zoetrope."

A "zoetrope" or "zoogyroscope" or "zoopraxiscope" was a projection machine to show a series of motion pictures rapidly so that they came close to modern movies. Muybridge, the inventor of the machine, was also the inventor of the name. He was inordinately fond of complicated names—having changed his own original simple Edward James Muggeridge to Eadweard Muybridge.

**Still photos remarkable, too**

But all this pioneering in the field of moving pictures should not let us overlook the still photographs which Eakins took. Although of uneven quality, all prints (many of them carefully made platinum prints—perhaps by Mrs. Eakins, who shared the interest of her husband in photography) show an amazing unity of conception.

That a man like Eakins who strove all his life so hard for utmost honesty in painting became enamored of the uncompromising magic camera eye is not surprising. Many painters are attracted by the sober integrity of the lens—not as a cheap help to painting but as another medium of expression.

Eakins' photographs were made independently; comparison seems to confirm that Eakins the painter never took advantage of the work of Eakins the photographer; he may have been inspired by his own photographs but he did not use them instead of the living model. But paintings and photographs show the same persistent homogeneity of vision. Some people have said of Eakins' portraits that they show the "angular, hard, and uncompromising qualities of photographs." It would be just as true to speak of the photographs having "the simplicity, warmth, tenderness, and strength of Eakins' paintings."



## The nude model controversy

Among the photographs are a number of nude studies. And these pictures recall what a tragic role the courageous and unembarrassed use of live models played in Eakins' life. In 1880, and particularly in Philadelphia, the question: "Are nude models necessary to teach anatomy to art students?" was highly debatable. Although Eakins considered male and female models as essential, their introduction into mixed classes (where girl students frequently considered "painting" in terms of little flower pictures) shocked part of the population. One of our photographs shows a model for one of the last classes before the "scandal of models posing in the nude" broke. This pusillanimous prudery forced this great teacher to retire and robbed America of one of her finest instructors in art.

## He died disappointed

When Thomas Eakins died in 1916, he was more than 70 years old—a man grown bitter by many disappointments, leaving a house filled with unsold canvases. There were portraits—any museum now would be glad to buy them—which were so little liked by the people whom he painted and who paid for them that they did not consider it worth the trouble to take them home. Some patrons left their pictures with the artist to gather dust; others destroyed the Eakins portraits later. Lloyd Goodrich, whose excellent Eakins biography is the standard work on the artist, searched for a certain portrait for his catalogue. The answer he received from the daughter of the man whom Eakins had painted is typical: "... The picture was so unsatisfactory that we destroyed it, not wishing his descendants to think of their grandfather as resembling such a portrait. ..."

## His self-estimate

During the hullabaloo over the nude models, Eakins was asked for some information about his career. He answered most reluctantly and closed his letter by saying: "... I have taught in life classes, and lectured on anatomy continuously since 1873. I have painted many pictures and done a little sculpture. For the public I believe my life is all in my work. ..."

That may be right.

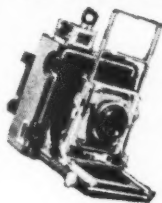
But it is up to us, the public, not to forget that little known part of his life—work that was devoted with such surprising success to photography. Eakins was one of the great American pioneer photographers. THE END

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## TANA HOBAN

(Continued from page 39)

wait for hours for the right moment. At other times, a sudden fleeting cloud formation will be just what I need. The child, too, requires constant attention. Sometimes I must follow the child around waiting for something to happen. At other occasions I try to stage the scene as nearly in accordance with my own ideas as possible. All the time, of course, I am watching the light. I frequently use a tin foil reflector to fill in the shadows. Apart from this I use no other mechanical lighting aids when out of doors.

## Evoking mood

Everything so far said has concerned itself with the photographer's end of the camera. We now come to the most important consideration in child photography—mood.

The main interest for both the photographer and the viewer of the finished picture is the fleeting expression on the face of the child, the twist of the body, the turn of the head. The mood of the picture governs every consideration I have touched upon. The child, the props, the locale, the lighting—all must be subordinated to the mood and integrated to sustain the mood. The photographer must first decide what effect he wants to create. Pictures of children may evoke tenderness or love in the viewer; others will induce a feeling of nostalgia, or melancholy, or even grief. The next question for the photographer to ask himself is: "How shall I convey the mood of this picture?"

## Always visualize the result

I think always in terms of this end result, probably because of my early training in art. The painter usually has the completed picture and all its mood and effect in his mind's eye before he lays his brush on the canvas. Like the painter who sketches his paintings beforehand, I sometimes visualize the completed picture and often make sketches first.

Mood is a very fragile thing in a photograph. One false note will shatter it completely. The great lesson I had to learn was patience. This patience applies particularly to creating the appropriate mood for the pictures, but also to the more basic requirement of remaining on friendly terms with the child who is the subject of the picture. Yes, mood must be created painstakingly in the studio. When I'm out of doors I find that a great many things—the light, the setting—help contribute to the creation of mood.

A mood picture always requires that a feeling of sympathy exist between the child and the surroundings, or between

the mother and the child, or between one child and another—and finally between the child and me.

The child's world is a world of movement and imagination. It is with this idea in mind that I photograph children. To me, movement does not necessarily mean action photography. (While most of my work has caught the child in the midst of various activities and conveyed a very real feeling of action, I also like to photograph children in apparently still moments.) Stillness in children is rather like the momentary rest of a bird in flight. Everything about them suggests a pause in motion, rather than an absolute suspension of motion.

## Suggesting motion

If a child is "still," motion or animation can be suggested. A little girl looking out of a window may give the feeling that she will turn and speak. A little boy shyly glancing downward seems as if he will raise his eyes.

I always try very hard to make my subjects feel much at ease, and so I treat the child exactly as I treat my own little girl. I provide milk and cookies, or even a full-fledged lunch or dinner when the time for it arrives. I make the child feel that he is under practically no restraint at all. He can examine my cameras, wander about the studio. Once he feels at home, he will begin acting naturally. I try to disguise my supervision as motherly advice or gentle suggestion. The infant is included in these considerations, too, for he must feel delightfully and lazily at ease before he will permit himself to be photographed to good effect.

The adult models who figure in pictures with children require a varying amount of coaching. They must get used to the children and gain their confidence. Where, by happy chance, a model has an infant or child of her own, I try to take the two together. The results are rarely unsatisfactory. With a certain amount of work on everyone's part, the intelligent model and the willing child will look as much like actual mother and child as those in real life.

## Final word

Photographing children then is largely a question of understanding the young subject in front of the camera. Hang the perfect lighting, the quibbling over exposure and the choosing of the absolutely correct equipment. Coat your own plates, and take the picture using the bottom of a milk bottle for a lens, if you want. But, above all, try to understand that special wonderland of children in mood and motion. Then you'll wind up with a better photograph than the photographer with the best equipment and no feeling for the children.—THE END

## HURRY UP AND WAIT

(Continued from page 43)

that old essential—speed—too much.

Generally, as soon as Stahl has his pictures, he goes back to the *Mirror*. In one of their six darkrooms (there are three men assigned to each and each man has his own locker for films and bulbs in the room), he unloads the Eastman Super Ortho Press cut film from the holders and starts to work. The film is placed in a solution of Hunt's H-7 Prepared Developer for four minutes. It is not agitated. Then it is placed in Hunt's hypo for 30 seconds to one full minute. One minute more for a water wash, and it is then ready for the printer.

### Water and 1000 watts

None of the photographers does his own printing. There are four printers at the *Mirror* and they do their jobs rapidly and well. The two enlargers in the printing rooms are unique to the Hearst organization. They were designed for speed by a Hearst employee, Walter Howey. The enlargers are horizontal rather than vertical. In the back of each enlarger is a 1000 watt bulb. Around the base of this bulb is a rubber washer. Water pours continuously through the enlarger, around the bulb and out again to keep the bulb from burning up the negatives. The negatives are always printed wet in a glassless negative carrier. Maximum exposure in this powerful enlarger is eight seconds.

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Even more astonishing, we asked Stahl to check how these prints stand up with so little fixing and washing. He went back to the files for prints which were two or three years old—and reported that the prints are still good!

### Strictly news

On a metropolitan daily, photographers develop specialties. Some like sports. Some features. Some theater or the night spots. But Bill Stahl is a news reporter. And since his kind of news usually has to do with people in trouble—their own or someone else's making—he

(Continued on page 94)

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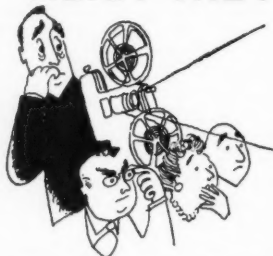
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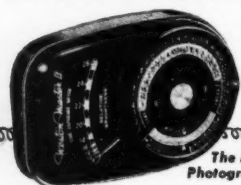
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## HURRY UP AND WAIT

(Continued from page 93)

usually finds himself in places where he has been before. And he knows just where to take the picture, whether outside at Felony Court, around the Women's House of Detention, or at City Hall.

Example: the photograph of Madeline Webb. There are two places to make a picture of someone coming into the House of Detention's courtyard. One is from a window in a building across the street. This entails a lot of bother—and a telephoto lens. The other place is from the temporary detention cell.

Stahl chose the latter place. He had never seen Miss Webb before, but he maintains that a news photographer develops over the years a kind of sixth sense which tells him which person he is seeking. And when she stepped through the doorway, the sixth sense whispered: "That's the one."

### News, hot or cold

Stahl's working procedure is something like this: He reports to the *Mirror* picture editor at 9 a.m. There may be an assignment ready for him. He's to photograph Gloria Glamorous at the Gotham Hotel. (This isn't hot news, but it's insurance in case a story doesn't break.) Stahl keeps in touch with his office by phone while on the assignment in case a more important news story breaks and he is needed. If nothing unusual happens he brings his stuff back to the office and develops it.

If there are no assignments, he goes out in one of the *Mirror's* three radio cars. These are connected with one man in the *Mirror* office who has a hookup with the police radio system. Thus, Stahl gets the calls as soon as the police. Sometimes calls come in from private citizens, giving the *Mirror* a tip. One night recently Stahl had two assignments. Both were the result of telephone tips. One was from a police call: a holdup. The other was a telephone tip: an old lady had been evicted from her apartment.

### Of dogs and hydrants

When there's nothing doing, he drives around and thinks up picture ideas. It may be an idea he won't be able to use for three or four months. For example, weather pictures are always good. So, one day Stahl was pondering the snow problems of dogs and fire hydrants. He thought of a dog patiently waiting while a snow shoveler did away with the obstacle in front of his objective. Three months later he saw the elements of his picture on a snowy day, explained the idea to the snow cleaner, got cooperation for the picture.

Many times, he has to create a picture out of nothing. One hot day Stahl heard that a little girl had been found,

quite lost and quite naked. By the time he got to the police station, she had been returned to her parents, and they had clothed her. He went to the family, told them he wanted to show his readers what had happened. They agreed. So the little girl, sans clothing once again, was posed in the police station. As soon as the flash went off, every man in the press room dashed into where Stahl was taking the picture. They didn't want to miss a story!

There are always people who don't want their picture taken. In one case (see page 42) the son in a Puerto Rican family living in Spanish Harlem had been murdered. Stahl suggested to the family that publicity might aid the prosecution of the murderer. They let him take the picture of the grieving women. There was no posing here.

Some kinds of celebrities don't want their pictures in print. J. P. Morgan was being brought into New York, ill, on a train. When the photographers arrived at the station, they found two tough, capable looking characters per photographer. They talked with a member of the Morgan family and asked to take pictures. They received permission, with the proviso that there be no flashbulbs. The photographers all removed the bulbs and waited for the train.

### News: Man bites gravel

By the time the train pulled in, a touring car and an ambulance so obscured the view that the promised picture possibility looked hopeless. Stahl got in between the two vehicles and snapped one picture (page 42). He swears he doesn't remember being hit or pushed. But he does know that as soon as he snapped the shutter, he found himself lying flat on his back.

In another case, Stahl traveled to Maryland to make photographs of a woman and her child involved in a custody case. The woman saw the photographers coming, picked up her child and ran. She also managed to throw a few rocks in the course of all this.

Sometimes a picture just happens. Such was the case when Stahl was driving home one day. He saw a crowd of people gathered, stopped his car, and took his camera out of its ever-ready position (the camera is always left open in a specially built compartment in the trunk). He found a small boy crying over his dead dog, the victim of a fast car, and took a prize-winning picture (page 40).

Ingenuity pays off in mass assignments, too. A number of years ago some prisoners escaped from Sing Sing. By the time they were captured, they had slain some policemen and a prison guard. The photographers learned they were to be brought into police headquarters at Ossining, about 40 miles north of New



York City. They were held outside the building for pictures, then taken inside. Stahl had spotted a window about six feet off the ground and he lifted his gangly body through it.

### Cops and cop-killers

Just inside the window, he met a court clerk who told him where the prisoners were. He got inside the room, climbed on a desk and started taking pictures of the police and the battling prisoners. The police knew he was taking the pictures, so they'd wait for the flash and then they'd hit—knowing it would take him a few seconds to reload. Usually, Stahl says, they don't allow photographers in the room at such times, but this time they were so mad that one of their number had been killed, that they didn't care.

When all the other photographers got in the room, Stahl watched one particularly enraged policeman. He felt that this one would take another swing at one of the prisoners as soon as the flashes went off. The other photographers shot. Then the policeman swung, Stahl shot simultaneously.

Later the prisoners appealed their death sentences and offered these pictures (page 41) as evidence of a charge of police brutality. They lost the appeal and were executed.

Most news photographers like their jobs and stay with them. They are paid according to American Newspaper Guild minimums, or more, on the *Mirror*. They serve a four year apprenticeship at \$52 a week. Then, over the next four years, their salary is increased to a minimum of \$120 a week. They work a 35-hour week, with time and a half for overtime. Some of them supplement their incomes with freelance work on the outside. Stahl does publicity work for Elliott Murphy's Aquashow in nearby Flushing. He also does assignments for *Collier's* and other magazines.

### Stahling around

But before you give up that dull job of yours for the romantic life of a newspaper photographer, remember that it can get dull, too. Stahl took a leave of absence three years ago to escape the rut he thought he was in. He went into child photography. He'd been in it for several years anyhow—with four children of his own. But after fifty mothers complained that their children's hair had photographed darker than it actually was and fifty more complained that it had photographed lighter, he went back to newspaper work to stay. After all—even if it is the same thing every day, even if the same grins are behind the same newly pinned-on medals—who cares?

Maybe tomorrow it'll be more hurry up—and a little less wait!—THE END

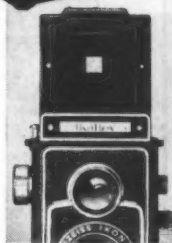
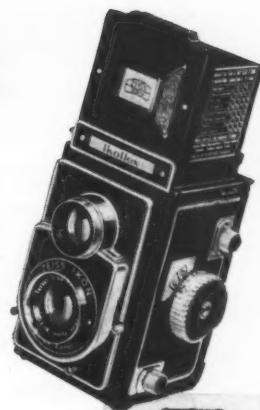
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**DYE TRANSFER**  
 (Continued from page 56)

printed so that full scale dye images will be obtained in the final result.

**Step 1. Determine the density range of the negative**

The first step of the printing process is therefore to determine the density range of the negatives and the density or blackness of a white area of the subject. This step may be carried out by measuring the blackness of the negatives in a densitometer, or by carefully estimating it by comparison with a calibrated scale of known densities. Fig. 1. A good range to work toward when making the negatives is 1.4, but remember that anything between 1.0 and 1.8 can be printed successfully. In the negatives used here, the ranges turned out to be 1.4 and the values for a white in the original subject were 1.72, 1.78 and 1.83. We can see from these density ranges that the developer should be mixed with one part of Solution A to two parts Solution B.

The maximum densities of the negatives (of the subject white) indicate the relative exposure times for the three matrix films, and can be used to calculate the exact times after the correct exposure has been determined for one matrix—usually the one made from the red separation negative.

**Making a test matrix**

The first step in making the matrices is to measure out enough of the developer components to make a small test matrix from the first (red separation) negative. Whether prepared by contact or projection, the trial matrix should include the highlight areas of the subject and sufficient exposure should be given so that these highlights show a barely perceptible veiling in the matrix after processing. This is exactly the same sort of test one would make when starting out with a new negative to make the best possible salon bromide print. The best way to judge the adequacy of the exposures is to dry the relief film quickly, dye it cyan (Fig. 2), and trans-

fer the dye to paper. This whole trial procedure of matrix exposure, processing, drying, dyeing and transferring will take about thirty minutes and it is a sure-fire method of judging the proper exposure.

The transfer of the winter scene shown here revealed the proper high-light veiling at an exposure of 14 seconds at f/8 enlarger lens aperture. This is the exposure time for the matrix to be dyed cyan. The exposure times for the other two matrices to be prepared from the green and blue separation negatives can also be determined by trial, but the simplest procedure is to use the previously determined density values to establish the other exposure times. Simply setting the dial on a Kodak Print Exposure Computer gives the times directly (Fig. 3). These negatives called for exposures of sixteen seconds for the green and eighteen seconds for the blue filter negatives.

**How to make the printing matrices**

With this information, all is in readiness to make the printing matrices. Three sheets of matrix film are exposed one after the other from the three separation negatives, being careful to position each negative so that its image falls in approximately the same position on the three films (Fig. 4). Leave a good margin around the film for ease in handling and subsequent agitation. The three matrices may be exposed and carried through the developer and fixing solutions together, or they may be processed successively in fresh developer solution. The first time a matrix is attempted, it will prove easier to process one sheet at a time—after that, the habit of processing all three at once can be practiced. Development, rinsing and fixation of a set of matrix films can be done in five minutes—no longer than would be required to process a couple of black-and-white bromide prints.

After the three matrix films have been in the fixing bath for two minutes, they are handled separately in successive one-minute washes of water at 120°F. This treatment (Fig. 5) removes all the non-

**Contrast Control Table**

Contrast in the matrices is controlled by varying ratio of two developer components.

Negative Den. Range	Developer Solution A	Developer Solution B	Ratio	Exposure Factor
1.8 (very high)	75cc	75cc	1:1	1.30
1.6 (high)	60cc	90cc	1:1 1/2	1.15
1.4 (normal)	50cc	100cc	1:2	1.00
1.2 (low)	30cc	120cc	1:4	0.85
1.0 (very low)	20cc	130cc	1:6 1/2	0.70

image gelatin of the film leaving the gelatin relief image—thick where there is a lot of silver and progressively thinner as the silver density decreases in the matrix. After four such washes, the relief matrix is rinsed in cold water and hung to dry. The same procedure is carried out for the other two matrices.

When the matrices are dry, they are superimposed one above the other with their images in register over a glass plate (Fig. 6) and two sides trimmed with a knife and straight edge or a trimmer. This registration can often be done more readily by first dyeing and drying the matrices. If the matrices are suitably trimmed, their three images are each in the same position in relation to the two cut edges of each film and accurate register of the three dye images may be obtained when they are transferred to paper.

### Transferring the dye images to paper isn't tough

Once the three relief images are made and suitably registered, we are ready to transfer the dye images to paper. This part of the Dye Transfer process, although new to photographers who have not previously done color printing, is in no way difficult. The only special equipment needed beyond the usual trays are a transfer blanket, a blanket clamp, the dyes and a print roller. The transfer blanket is simply a plastic sheet with several cemented disks on one side (Fig. 7). The trimmed edges of the matrices are butted against these disks so as to locate the dye images in such a way that each one will transfer to the same place on the sheet of transfer paper. The transfer blanket is secured to a flat surface by means of the blanket clamp. A plate glass surface under the blanket is ideal because of its flatness.

The operation of transferring the dyes involves bringing the dyed matrix in contact with the paper surface by using the blanket to position the matrix properly, and using the print roller to bring the dyed relief image into close contact with the gelatin of the paper support. This operation is carried out once for each dyed matrix, transferring the dye images in the order cyan, magenta and yellow.

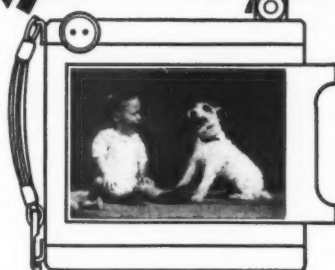
### Removing excess dye

The only dye that we want to transfer to the paper is the dye held in the gelatin relief. All surface and non-image dye must be removed. This is done by rinsing the matrix in a 1% acetic acid solution for one minute, agitating it during this period. The matrix is then placed in a second tray of 1% acetic acid, the holding bath, until you are ready to transfer the dye. The holding bath simply keeps the dye in the matrix until transferred—it may be left up to a minute in this tray. (Continued on page 98)

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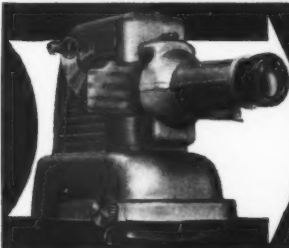
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## DYE TRANSFER

(Continued from page 97)

A piece of Dye Transfer paper, which has been soaking in the Dye Transfer paper conditioner long enough to be fully expanded, is positioned on the flat surface so that it will receive the dye images when the blanket bearing the matrix is rolled over it. The paper is squeegeed firmly in place and then the blanket is held back as shown (Fig. 8) and the wet matrix positioned on the button bearing surface with the dyed relief uppermost. The matrix is slid into contact with the three buttons on the two edges of the matrix which were previously trimmed for registration purposes. Now the print roller is used so as to bring the matrix and Dye Transfer paper into contact with one stroke. The cyan dye will all have transferred to the paper within four or five minutes. While this transfer is taking place, the magenta-bearing matrix is rinsed in a fresh 1% acetic acid solution for one minute and placed in the holding bath.

### The next two matrices

When the cyan dye image has transferred, the blanket and matrix are rolled back (Fig. 9) and the now dye-free matrix is placed in a tray of water to wash briefly before being returned to the cyan dye for further printing. The magenta dye is now transferred in exactly the same manner as the cyan dye. If the matrices were properly trimmed and positioned on the blanket, the magenta dye image will transfer in register with the cyan dye image already in the paper. Exactly the same operations are repeated for the yellow matrix (Fig. 10) and after this dye has transferred to the paper, about two minutes, the color print can be seen in full natural color. If everything is just right, the process may be repeated indefinitely so long as the matrices are not abraded, and are cleaned between each transfer. A half dozen prints can readily be printed in an hour by following the same procedure.

After every few prints, the actual number depending on their size and density, the dye solutions are replenished with dye concentrates from the Dye Transfer dye set. This replenishment makes possible the production of a long series of identical prints.

### Correcting dye contrasts

In some instances, the very first print will be just what is wanted. More than likely, however, it can stand some improvement just as one usually finds is

the case when making black-and-white bromide prints. In Dye Transfer it is not necessary to go back and remake the matrices unless they are 'way out of line—and they should not be when the negatives have been measured carefully, a good test matrix made, and the full sized matrices properly exposed. The same matrices may be used and a great deal of control is available both in the composition of the dye baths and the composition and use of the first acid rinse solution.

Three adjustments are possible for each dye image. The *contrast* may be increased or decreased, or the *density* may be decreased. If a heavier dye image is required (greater highlight coverage), there is no adequate corrective except a heavier matrix.

To increase *contrast*, the dye solutions may be acidified as indicated on the card packed with the Dye Transfer dye set. The same matrix dyed in such an acidified dye bath will soak up more dye and transfer a more contrasty dye image than it did when soaked in a dye of normal composition. A change that appears roughly equivalent to a grade of black-and-white bromide paper is obtainable in this manner.

To lower dye image *contrast* or *density*, additions are made to the first acid rinse bath of 1% acetic acid. If still lower contrast is desired, a few centimeters of 5% sodium acetate are added to the acid rinse. The more sodium acetate added, and the longer the matrix is rinsed in this solution, the lower the contrast of the dye image transferred to paper. As before, the dyed matrix is placed in the regular 1% acid holding bath before transfer. To lower highlight *density*, a few cc's of highlight reducer solution may be added to the first rinse bath and the highlights will be lightened without appreciably affecting the remainder of the picture.

### It's a flexible technique

These control procedures may be applied to any one or all three of the dyed matrices, giving the operator flexible techniques for controlling the color images at the printing stage that are not available in other types of color printing process. As long as the same control steps are repeated each time, identical successive prints may be obtained. All in all, this is a process of great flexibility, capable of producing the finest of color reproductions. The only requisite to carrying it out successfully is to exercise moderate care in following instructions. The results are worth it. —THE END

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# Salon Calendar

Closing Date	Name of Salon Date of Exhibition	For Entry Blank Write to
January 31	*14th Annual Circle of Confusion Exhibition of Photography. Whittier Art Gallery. Color slides and pictorial prints. February 11-25.	John S. Goodwin, Exhibition Chairman, 2028 Howard St., Whittier, Cal.
February 9	*15th Rochester International Salon of Photography. Memorial Art Gallery, Rochester, N. Y. March 2-April 1.	Ezra C. Poling, Exhibit Director, Memorial Art Gallery, Rochester 7, N. Y.
March 15	*1951 Seattle International Exhibition of Photography. Seattle Art Museum. April 4-May 6.	Ray B. Pollard, Exhibition Secretary, P. O. Box 605, Seattle 11, Wash.
March 15	15th South African Salon of Photography. Johannesburg. May.	Hon. Salon Secretary, P. O. Box 7024, Johannesburg, South Africa.
March 25	1st Exhibition of Wild Bird Photographs. New York State Museum. April 1-May 31.	W. J. Schoonmaker, New York State Museum, Albany 1, N. Y.
March 31	7th Louisville International Salon of Photography. Pictorial prints. J. B. Speed Art Museum. April 28-May 20.	Ernest T. Humphrey, 4722 Burkley Ave., Louisville 8, Ky.
March 31	7th Louisville International Salon of Photography. Color Slides. Audio-Visual Dept. of Louisville Public Library. April 13 & 18.	Catharine J. Wiley, 2082 Douglas Blvd., Louisville 8, Ky.
March 31	*4th Annual Marine Exhibition, sponsored by the James River Camera Club and the Mariners Museum, Newport News, Va.	T. P. Holt, 1016 Ferguson Ave., Newport News, Va.
April 7	7th Canadian International Exhibition of Colour Photography. Royal Ontario Museum Theatre. April 16-18.	W. J. Blackhall, % Toronto Camera Club, 2 Gould St., Toronto, Ontario.
April 18	3rd New York International Color Slide Exhibit.	Dr. R. B. Pomeroy, 745 Fifth Avenue, New York 22, N. Y.

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## BEGINNERS' MISTAKES

(Continued from page 44)

start setting your camera that way?"

"Long time ago—I learned it the hard way. I'd been shooting some pictures in the country. It was bright and sunny and I'd been doing some close-up work. Late in the afternoon, on the way home, bang, there's a terrific traffic accident right in front of me. I opened the camera case and shot like crazy. When I developed the film, I found an underexposed, hazy mass of nothing. The camera had been set at three feet, f/16, and 1/250 sec."

Did I have any other favorite precaution?

### Don't forget that filter

"Yes," I replied. "I've been shooting a lot of color lately and always use a lens shade on my camera. The shade also holds my filter, and I sometimes find myself forgetting to take out the K-2 filter before loading with color. Until I learned to take that little precaution, I shot more than one color picture in one color—yellow. Each time I made the mistake, it cost me almost the price of the filter."

The clerk smiled sympathetically. "I had a roll of pictures like that once. Grass, cows, sky, trees—all red. Most interesting."

He thumbed through a few more envelopes and spread some contact portrait prints on the counter.

"Look at this poor guy's pictures. He can't seem to get it through his head that backgrounds can't make a picture but they sure can break it. Here's an example, a nice picture of his girl friend—only he photographed her in front of a small tree. Won't she be surprised when she sees a tree trunk growing out of her head and twigs in her ears. If the photographer had shifted the model a few feet to either side, it would have been a pretty fair portrait."

The clerk sifted a few more prints from the same envelope and suddenly emitted a groan.

"Feel sick?" I asked.

"Almost," he answered. "If it isn't one thing it's another. See, the same guy de-

cided on a different approach. He moved 'way back. This time there isn't a darn thing in focus. He forgot to reset the focusing scale.

"Here's another one. This time he was so far distant from his subject, he didn't need as much exposure as the close-up did. The old rule of 'the closer the subject the more light it requires, the farther away the less light,' didn't mean much to him. But it meant a lot to the roll of film inside his camera. His exposure for the five-foot close-up was right on the button, but for the distant shot he was giving the film at least twice as much light as such a scenic needed."

He laid the negative against a ground-glass viewer for inspection.

"There were some beautiful clouds in the sky—you can just see traces of them—but they were practically burned up by over-exposure."

After replacing the pictures and negatives in the envelope, the clerk continued.

"Well, this fellow may have twigs growing out of his girl friend's ears, have the exposure wrong or shoot half his pictures out of focus, but his hand is steady as a rock. Here's another envelope. Now this fellow watches his backgrounds, gets his exposures on the nose and maybe he even focuses needle sharp—but his pictures are nearly always fuzzy. His hand isn't steady enough to support a camera at 1/25 or 1/50 sec. but he refuses to use a tripod. When I suggested he buy one, he acted as if I had insulted him.

"Of course, even some pro's argue about the need for a tripod," continued the clerk. "Some claim they can hand-hold exposures as long as a full second, but even these photographers will tell you that it's a risk at best at anything slower than 1/50th. Why be a sucker and take chances? Any time you have a chance to use a tripod, don't hesitate to use it," the clerk concluded.

"As I said in the first place, the chief difference between professional quality work and amateurish quality is that the rookies haven't learned yet to take precautions before they shoot."—THE END

## DIIVERSAL

(Continued from page 88)

print from the color transparency which is reproduced on page 36. Although the light blue sky has burned out a little, as would be expected, the flesh tones, even to the red of those apple-cheeks, have not darkened a bit more than normal.

The blue playsuit looks a normal tone of gray, without too much lightening and the yellow has not darkened as much as might be expected, although the yellow layer of the color film is the purest.

Diaversal can be used with either color or black-and-white originals. The exposures will be about the same, given originals of equal densities. And, yes, it can be used with negatives, except that your print will be a negative just like your original. That might make some interesting salon entries, especially when the paper becomes available in larger sizes.

But for now, it bids fair to be a God-send for the movie amateur and for the color-slide artist who needs must have some album prints for Aunt Minnie and Cousin Throckmorton.—Don Bennett

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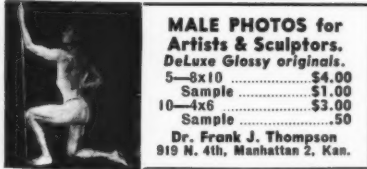
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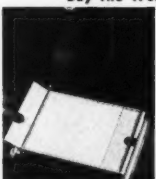
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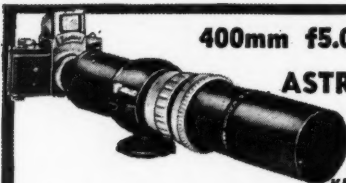
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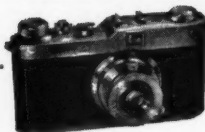
- 5x focusing eyepiece for extreme detail
- 2x focusing eyepiece for sports, portraits — doesn't invert or reverse image
- Positive lever or cable release sync
- Locking, registering camera attachment

For all models Kine Exakta, Contax-S, etc. .... **219.50**

With Identoscope, 2x or 5x eyepiece, for all Leicas **329.50**

## New! 35mm OPEMA (Czech) CAMERA

range-finder coupled with  
crisp f3.5 "C" coated Belar,  
brand-new, (as illustrated) ....



**ONLY 59.50**

including full year service guaranty, and featuring:

- Finest Czech manufacture (same Opematus, Flexaret)
- Takes all standard 35mm film cartridges
- shutter to 1/500
- Economy format — 24x32mm
- Full automatic operation
- Coincident-image contrast colored range-finder
- Combined range and view finder — single window
- Interchangeable lenses
- Removable back

The NEW Opema surpasses in quality other cameras selling up to twice this price. Sold with no-cost 10 day trial. Try it — convince yourself!

Also with: f2.8 "C" coated Belar ..... \$69.50

f2.0 "C" coated Opematus ..... 99.50

Genuine leather ever-ready case ..... 6.50

## Latest MODEL II KINE EXAKTA

with ultra-sharp Carl Zeiss  
(Jena) f3.5 "T" coated Tessar,  
brand-new, (as illustrated) ....



**ONLY 118.50**

including full year service guaranty, and featuring:

- Built-in flash sync
- 20 speeds, 12 secs to 1/1000
- Variable delayed action
- Interchangeable lenses
- Film cut-off knife
- Brilliant plano-convex ground-glass
- Full automatic operation
- ... and many others

Model II Kine's also available with:

f1.9 "V" coated Meyer Primoplan ..... \$159.50

f2.0 "T" coated Carl Zeiss Biotar ..... 169.50

Model I's, including all above features, with:

f2.9 "V" coated Meyer Trioplan ..... \$116.50

f2.0 "T" coated Carl Zeiss Biotar (top lens in the Kine Exakta line) ..... 147.50

Genuine leather ever-ready cases, with above.. 7.50

Lowest exchange prices other models toward Model V's

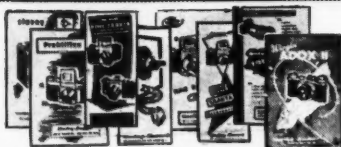
## "Plus-value" used cameras

Many of the following are hard to find from new — all are in  $\approx$  1 first-class condition, guaranteed for a full year. Selected and priced for real value from our great stock — one of the largest in the entire country — we suggest you buy on our no-cost 10 day trial, convince yourself! If you wish, buy now — pay out of income; the second column of figures in the listing indicates down payment.

35mm Vokar, range-finder coupled, f2.8 Wollensak	\$37.50	\$5.00
Perflex 102, r-f cpd, f3.5 Kodak Ektar, new	37.50	5.00
Argus C11, r-f cpd, f3.5 Cintar	27.50	...
Kodak 35, f4.5 Kodak Anastigmat	24.00	...
Kodak 35, r-f cpd, f3.5 Kodak Anastigmat Special	52.50	5.25
Super Dallmeier, r-f cpd, f2.9 Schneider Radionar	57.50	5.75
Bolsey B, r-f cpd, f3.2 "W" ctd Wollensak Raptor	39.00	5.00
Retina IIa, r-f cpd, f2.0 Schneider Xenon, Comp.	109.00	10.90
Contax I, r-f cpd, f2.0 Carl Zeiss Sonnar	95.00	9.50
Leica IIIc, r-f cpd, f3.5 Leitz Elmar coated	149.50	14.95
Leica IIIc, r-f cpd, f2.0 Leitz Summitar, coated	219.00	21.90
Kine Exakta I, f2.8 Carl Zeiss Tessar, coated	108.00	10.80
Kine Exakta V, f3.5 Carl Zeiss Tessar, coated	145.00	14.50
Kine Exakta V, f2.0 Carl Zeiss Biotar, coated	219.50	21.95
2 1/4 sq Kodak Volland, f3.5 Kodak Anastigmat	34.00	5.00
Anso Speedex, f4.5 Anso Speedex Special	29.50	...
Zeiss Ikonta B, f4.5 Carl Zeiss Novar	37.50	5.00
Zeiss Super Ikonta BX, f2.8 Zeiss Tessar, flash, etc.	179.00	17.90
Zeiss Ikonflex I, f3.5 Zeiss Novar	59.50	5.95
Auto. RolleiFlex, f3.5 Zeiss Tessar, Holland Sync	159.50	15.95
2 1/4 x 3 1/4 Kodak Monitor, f4.5 Kodak Anastigmat Special	54.50	5.45
Zeiss Super Ikonta C, r-f cpd, f4.5 Zeiss Triotar	87.00	8.70
B&J Press, f4.5 (choice), range-finder, flash	99.50	9.95
Busch C, f4.5 (choice), range-finder, flash	109.50	10.95
Speed Graphic, f4.5 (choice), range-finder, flash	129.50	12.95
4x5 B&J Press, f4.7 (choice), range-finder, flash	119.50	11.95
Busch D, f4.7 (choice), range-finder, flash	129.50	12.95
Speed Graphic, f4.7 (choice), range-finder, flash	139.50	13.95
Korona View, 15 cm (6") Zeiss Tessar in Compur	89.00	8.90
8x10 Korona View, 12"-19"-25" f7.0 Turner-Reich Conv	179.50	17.95
3 1/2" f4.5 Ilex, enlarging, new	16.50	...
5" f4.5 Cooke WW, enlarging, (surplus)	19.75	...
5 1/4" f4.5 Wollensak Raptor, enlarging, coated, new	38.75	5.00
6 1/4" f4.5-12" f6.3 Korona Convertible, Rapax Press	59.50	8.95
6 1/2" f4.5 Voigtländer Heliar, Compur A	59.50	5.95
6 1/2" f4.5 Carl Zeiss Tessar, Compur A	59.50	5.95
6 1/2" f3.5 Schneider Xenar, Compur A	45.00	6.50
8" f2.9 Dallmeyer (Pentac), barrel, (surplus)	49.50	6.95
8 1/4" f4.5-20" f6.8 Turner-Reich Convertible, Ilex Acme	124.00	12.40
8 1/4" f4.0 Wollensak Verita, Botox shutter, portrait lens	79.50	7.95
12" f5.0 Kodak Aerostigmat, Botox, new	169.50	16.95
12" f9.0 Goerz Apo-Artar, Ilex Acme, super-sharp	189.50	18.95
14" f6.3 Kodak Commercial Ektar, Ilex Universal	189.50	18.95
36" f6.3 Dallmeyer Tele, lists over \$1,000, (surplus)	289.50	28.95
35mm Leitz Valoy enlarger, less lens	49.50	5.00
Leitz Focomat enlarger, less lens	89.50	8.95
Universal Micrographic, less lens	29.00	...
2 1/4 sq Praxidos, 3" f4.5 Ennastar	42.50	5.00
2 1/4 x 3 1/4 DeJure Versatile I, 3 1/2" f4.5 lens	82.50	8.25
4x5 Keyser Cold-light, distortion cont, less lens, new	69.50	6.95
DeJure Versatile Pro, 5 1/2" f4.5 Wollensak lens	129.00	12.90
5x7 Elwood S-2, 6 1/2" f6.3 Roussel, new	79.50	7.95
Kodak Autofocus C, 7 1/2" f4.5 $\approx$ 34 Kodak Anast	179.50	17.95
8mm Bolex H-8, f11.9 focus mount, built-in frame count	179.00	17.90
Keystone K-33, f2.5, universal focus	34.50	5.00
Revere 88, f2.5 universal focus	47.00	5.00
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16mm Bolex H-16, f11.9 focussing, built-in frame counter	229.00	22.90
Pathe Super-16, reflex focussing, less lenses	269.00	26.90
Cinklox A-3, f2.5 universal focus	29.50	...
Keystone A-3, f2.5 universal focus	34.50	5.00
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Keystone A-75 projector (silent)	59.50	5.95
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16mm f1.5 Meyer Kine-Plasmat Wide-angle, su-up	76.00	7.60
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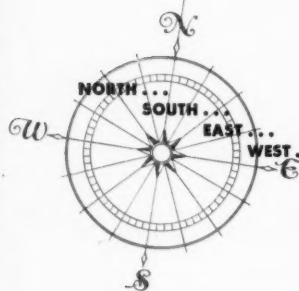






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